

HCD-H61/H61M

SERVICE MANUAL

Discard HCD-H61/H61M Service Manual (No. 9-957-612-11) previously issued. This Service Manual contains it.

- HCD-H61 is the tuner, deck, CD and amplifier section in FH-B610/B700.
- HCD-H61M is the tuner, deck, CD and amplifier section in MHC-610.



Photo: HCD-H61 E model

AEP Model

E Model

Australian Model

Tourist Model

HCD-H61

US Model

Canadian Model

AEP Model

UK Model

HCD-H61M

SPECIFICATION

AUDIO POWER SPECIFICATIONS (For the Customers in the USA)

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:

With 6 ohm loads, both channels driven, from 60 Hz—20 kHz; rated 35 watts per channel minimum RMS power, with no more than 1% total harmonic distortion from 250 milliwatts to rated output.

Tuner section

FM stereo. FM/AM superheterodyne tuner

FM tuner section

Tuning range For tourists model
76.0—108.0 MHz

For East European model
65.0—74.0 MHz

87.5—108.0 MHz

For other countries models
87.5—108.0 MHz

Antenna FM lead antenna (for HCD-H61M)
Telescopic antenna (for HCD-H61)

Antenna terminals
75 ohm unbalanced

Intermediate frequency
10.7 MHz

AM tuner section

Tuning range For US, Canadian model
AM: 530—1,710 kHz
For Italian model
AM: 522—1,611 kHz
For Germany model
AM: 531—1,602 kHz
For AEP, East European, UK model
MW: 531—1,602 kHz
LW: 153—279 kHz

CD Section	Model Name Using Similar Mechanism		NEW
	CD Mechanism Type		CDM13B-5BD4E
	Base Unit Name		BU-5BD4E
Tape deck Section	Model Name Using Similar Mechanism		DXA-H2750
	Tape Transport Mechanism	DECK A	TCM-190RA12A
		DECK B	TCM-190RB22A

For other countries models
MW : 531—1,602 kHz (at 9 kHz step)
530—1,710 kHz (at 10 kHz step,
except for Middle Eastern model)

SW : 5.950—17.900 MHz

Antenna AM loop antenna

External antenna terminals

Intermediate frequency

450 kHz

Amplifier section

For AEP, UK, East European, Germany, Italian model

Continuous RMS power output

35+35 watts (6 ohms at 1 kHz, DIN)

40+40 watts (6 ohms at 1 kHz, 5% THD)

Music power output

80+80 watts (6 ohms at 1 kHz, 10% THD)

For US, Canadian model

35+35 watts (6 ohms at 1 kHz, 5% THD)

For other countries models

Continuous RMS power output

40+40 watts (6 ohms at 1 kHz, 5% THD)

Peak music power output

450 watts (4 speakers driven)

Inputs

For E, Saudi Arabia, Australian,

Malaysia, Singapore, Tourist model

MIX MIC (minijack)

Sensitivity 1 mV,

impedance 600 ohms

VIDEO/AUX (phono jack)

sensitivity 250 mV,

impedance 47 kilohms

For AEP, UK, Germany, East European,

Italian model

PHONO (phono jack)

sensitivity 5 mV,

impedance 47 kilohms

For US, Canadian model

VIDEO/AUX (phono jack)

sensitivity 250 mV,

impedance 47 kilohms

— Continued on next page —

COMPACT DISC DECK RECEIVER
SONY



Outputs
HEADPHONES (stereo minijack):
 accept headphones of 8 ohms
 or more.
SPEAKERS: accept impedance of 6 to
 16 ohms.

SURROUND SPEAKER (only for E,
 Saudi Arabia, Australian, Malaysia,
 Singapore, Tourist):
 accept impedance of 8 to 16 ohms.

Cassette deck section

Recording system
 4-track 2-channel stereo

Frequency response
 (DOLBY NR OFF)
 60—13,000 Hz (± 3 dB),
 using TYPE I
 cassette (Sony HF-S)
 60—14,000 Hz (± 3 dB),
 using TYPE II
 cassette (Sony UX-S)

Wow and flutter
 0.1% WRMS \pm 0.3% (DIN)

Compact disc player section

System Compact disc digital audio system
Laser Semiconductor laser
Wavelength=780—790 nm

General

Destination	Power requirements	Power consumption
US, Canadian	120V AC, 60Hz	100 watts
AEP, G, IT, EE	220—230V AC, 50/60Hz	110 watts
UK	240V AC, 50Hz	240W
Australian		130W
E, EA, MY, SP, JE	110—120V/220—240V AC adjustable, 50/60Hz	130 watts

- AUS : Australian model
- EA : Saudi Arabia model
- G : Germany model
- EE : East European model
- IT : Italian model
- MY : Malaysia model
- SP : Singapore model
- JE : Tourist model

Dimensions

Approx. 225 X 285 X 265 mm (w/h/d)
 (8 $\frac{1}{2}$ X 11 $\frac{1}{4}$ X 10 $\frac{1}{2}$ inches)
 incl. projecting parts and controls

Mass Approx. 6.3 kg (14 lb 5 oz)

Design and specifications subject to change
 without notice.

Note

This appliance conforms with EEC Directive
 87/308/EEC regarding interference suppression.

Dolby noise reduction manufactured under license from
 Dolby Laboratories Licensing Corporation.
 "DOLBY" and the double-D symbol  are trademarks of
 Dolby Laboratories Licensing Corporation.

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FH-B610/B700 MHC-610

SERVICE MANUAL

US Model
Canadian Model

UK Model

MHC-610

AEP Model

FH-B610/MHC-610

E Model

Australian Model

Tourist Model

FH-B700

- FH-B610/B700 and MHC-610 are composed of following models. As for the service manual, it is issued for each component models, then, please refer to it.

COMPONENT MODEL NAME FOR FH-B610/B700 and MHC-610

System Component	FH-B610	FH-B700	MHC-610
Tuner, deck, CD, amplifier	HCD-H61		HCD-H61M
Speaker System	SS-H51		SS-H10

SPECIFICATIONS

Destination	Power requirements	Power consumption
US, Canadian	120V AC, 60Hz	100 watts
AEP, G, IT, EE	220 – 230V AC, 50/60Hz	110 watts
UK	240V AC, 50Hz	240W
		130W
E, EA, JE	110 – 120V/220 – 240V AC adjustable, 50/60Hz	130 watts

Dimensions	Approx. 225 x 285 x 265 mm (w/h/d) (8 7/8 x 11 1/4 x 10 1/2 inches) incl. projecting parts and controls
Mass	Approx. 6.3 kg (14 lb 5 oz)
Accessories supplied	Remote commander (1) Sony SUM-3 (NS) batteries (2) AM loop antenna (1) FM lead antenna (1) (MHC-610: AEP model only) Speaker cords (2) (MHC-610 only)

- AUS : Australian model
- EA : Saudi Arabia model
- G : Germany model
- EE : East European model
- IT : Italian model
- JE : Tourist model

Design and specifications subject to change without notice.

MINI Hi-Fi
COMPONENT SYSTEM
SONY®



PARTS LIST

NOTE:

- Items marked "*" are not stocked since they are seldom required for routine service.
 - Some delay should be anticipated when ordering these items.
- AUS: Australian
· EA: Saudi Arabia
· EE: East European
· IT: Italian
· JE: Tourist

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.
--	---

No.	Part No.	Description	Remark
ACCESSORY & PACKING MATERIALS			

	1-466-944-11	REMOTE COMMANDER (RM-S61)	
	1-501-374-11	ANTENNA, LOOP	
	1-501-594-11	ANTENNA (FM) (MHC-610:AEP/UK)	
Δ	1-569-007-11	ADAPTER, CONVERSION 2P (FH-B700:E/JE)	
Δ	1-569-008-11	ADAPTER, CONVERSION 2P (FH-B700:EA)	
	1-557-954-21	CORD, SPEAKER CONNECTION(MHC-610:US/Canadian)	
	3-756-249-11	MANUAL, INSTRUCTION (ENGLISH/SPANISH/CHINESE) (FH-B700:E/EA/JE)	
	3-756-249-21	MANUAL, INSTRUCTION (ENGLISH) (FH-B610:EE, FH-700:AUS, MHC-610:US/Canadian/UK)	
	3-756-249-41	MANUAL, INSTRUCTION (FRENCH/PORTUGUESE/ GERMAN/DUTCH) (FH-B610:AEP, MHC-610:AEP/Canadian)	
	3-756-249-51	MANUAL, INSTRUCTION (SPANISH/ITALIAN) (FH-B610:AEP/IT, MHC-610:AEP)	
	3-756-249-61	MANUAL, INSTRUCTION (GERMAN) (FH-B610:Germany)	
	3-756-249-71	MANUAL, INSTRUCTION (GERMAN/RUSSIAN/POLISH) (FH-B610:EE)	
	3-756-249-81	MANUAL, INSTRUCTION (SWEDISH/FINNISH) (FH-B610:AEP, MHC-610:AEP)	
	3-756-249-91	MANUAL, INSTRUCTION (ARABIC) (FH-B700:E/EA)	
*	4-941-762-11	COVER (MLY), BATTERY (FOR RM-S61)	
*	4-956-394-01	CUSHION (FOR SS-H10)	
*	4-956-539-01	CUSHION (FOR SS-H51)	
*	4-956-936-01	CUSHION (LOWER) (FOR HCD-H61/H61M)	
*	4-956-937-01	CUSHION (UPPER) (FOR HCD-H61/H61M)	
*	4-957-463-01	INDIVIDUAL CARTON (MHC-610)	
*	4-957-464-01	INDIVIDUAL CARTON (FH-B610)	
*	4-957-465-01	INDIVIDUAL CARTON (FH-B700:E/EA/JE)	
*	4-957-466-01	INDIVIDUAL CARTON (FOR HCD-H16M:UK)	
*	4-957-899-01	INDIVIDUAL CARTON (FH-B700:AU)	
*	X-4943-496-1	HANDLE ASSY (FH-B700:E/EA/JE)	

SAFETY CHECK-OUT

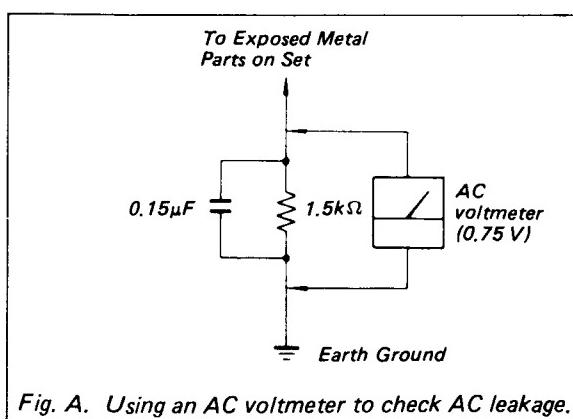
After correcting the original service problem, perform the following safety check before releasing the set to the customer:

Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

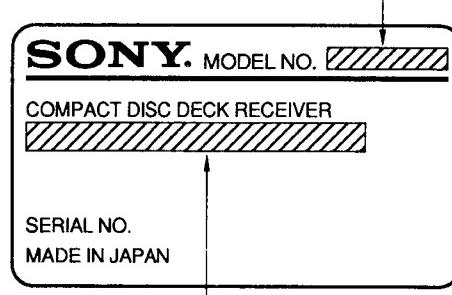
1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)



MODEL IDENTIFICATION

— Specification Labels —

AEP, Germany, Italian, E, East European,
Saudi Arabia, Australian, Malaysia,
Singapore, Tourist model : HCD-H61
US, Canadian, AEP, UK model : HCD-H61M



US, Canadian model : AC: 120V 60Hz
AEP, East European model : AC: 220-230V~50/60Hz
UK, Australian model : AC: 240V~50Hz
Germany, Italian model : AC: 220-230V~50Hz
E, Saudi Arabia, Malaysia,
Singapore, Tourist model : AC: 110-120/220-240V~50/60Hz

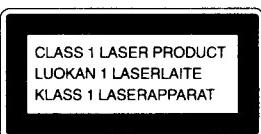
SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK OR DOTTED LINE WITH MARK ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

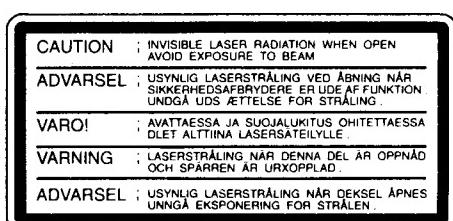
LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.



This appliance is classified as a CLASS 1 LASER PRODUCT
MARKING is located on the rear exterior.

The following caution label is located inside the unit.

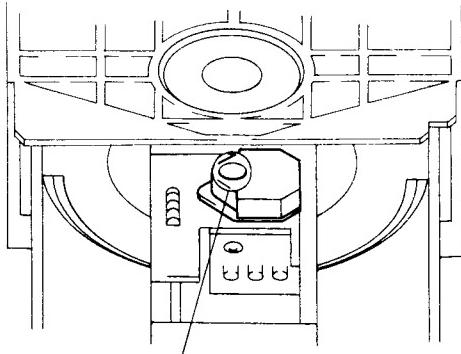


SECTION 1

SERVICING NOTES

LASER DIODE AND FOCUS SEARCH OPERATION CHECK

1. Make POWER switch on with no disc inserted and disc table closed.
2. Confirm that the following operation is performed while observing the objecting lens.



- ① Confirm that laser beam is spread.
- ② Up and down motion of the objective lens. (3 times)

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.

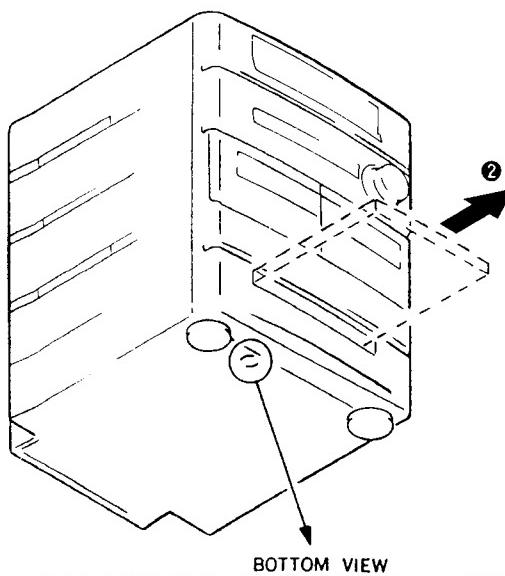
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.

The flexible board is easily damaged and should be handled with care.

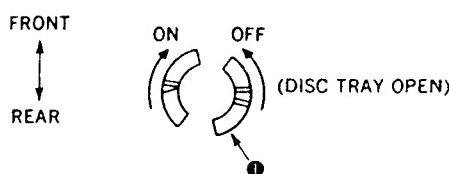
NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

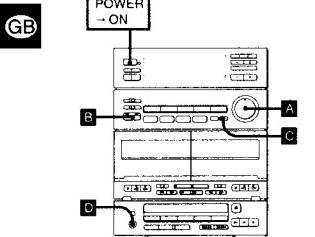
HOW TO OPEN THE DISC TRAY WHEN POWER SWITCH TURNS OFF



- (1) Insert to ① for tapering driver, etc., and turn in the direction of arrow OFF. (Disc tray open)
- (2) Tray as come out little of front panel, pull out in the direction of arrow ② by hand.



Audio Adjustment

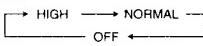


Volume Adjustment [A]

Turn VOLUME clockwise to increase the sound level, or counterclockwise to decrease it.
(Or press VOL + or - on the remote commander.)

Sound Quality Adjustment

To reinforce bass [B]
Press DBFB* so that the indicator lights up. Each time you press the button bass reinforcement level changes cyclically as follows:



To activate surround effect for stereo sound [C]

Press S-SUR** during a stereo sound reproduction so that the indicator lights up. This creates the atmosphere of a movie theater or concert hall. This function is not effective for a monaural sound.
If you connect the surround speakers (not supplied) to the SURROUND SPEAKERS jacks so that you can obtain the best possible surround effect.

*DBFB=Dynamic Bass Feedback
**S-SUR=Simulated surround

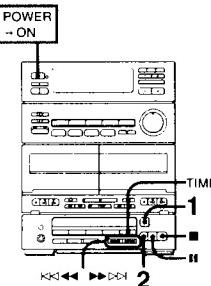
Personal Listening [D]

Connect headphones to HEADPHONES. No sound comes from the speakers.

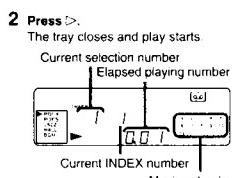
CD Playing

Playing the Entire Disc

Let's play from the first selection.



1 Press \triangle OPEN/CLOSE to open the tray.
Place a disc with the printed side up.



To stop play
Press ■

To stop for a moment during play
Press II.
To resume play, press it again or >

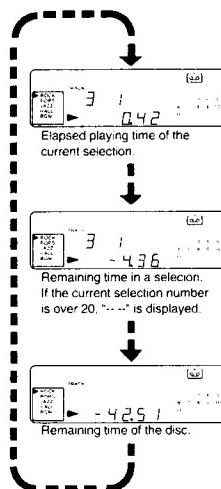
To stop play and open the tray
Press \triangle OPEN/CLOSE.

Caution on adjusting volume
Do not turn up the volume while listening to a portion with very low level inputs or no audio signals. If you do, the speakers may be damaged when a peak level portion is played.

To play an 8 cm (3-inch) CD
Place it on the inner circle of the tray. If the disc is provided with an adaptor, first remove it. Do not put a normal CD (12 cm/5 inch) on top of an 8 cm CD.

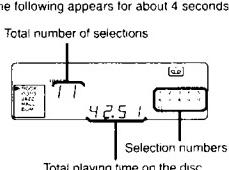
Information display

To change the time display
Press TIME during play.
The display changes to give you the following information



Note
You can also see the information above by pressing TIME during Shuffle, Delete and Program Play, however, the remaining time is shown as "..." when the disc has more than 20 selections.

To display the total playing time of the disc
Press TIME in stop mode.
The following appears for about 4 seconds



This information appears also when you close the tray by pressing \triangle OPEN/CLOSE.

Locating a Particular Selection — Automatic Music Sensor (AMS)

The AMS locates the beginning of a selection.

To locate the beginning of the current or preceding selection
Press $\triangle\triangle\triangle$ (or $\triangle\triangle$ on the remote commander) as many times as required.

To locate the beginning of the succeeding selection
Press $\triangleright\triangleright\triangleright$ (or $\triangleright\triangleright$ on the remote commander) as many times as required.

Locating a Particular Point in a Selection

You can locate any particular point in the selection. This function works during either play or pause. This operation is not possible with the remote commander.

To search while monitoring the sound

To move forward at high speed
keep $\triangleright\triangleright\triangleright$ depressed and release it at the desired point.

To move backward at the high speed
keep $\triangle\triangle\triangle$ depressed and release it at the desired point.

To search quickly

1 Press II to set the unit in pause mode.

2 Keep $\triangle\triangle\triangle$ or $\triangleright\triangleright\triangleright$ depressed.

The search speed increases, but there is no sound. Find the desired point by observing the display and release the button.

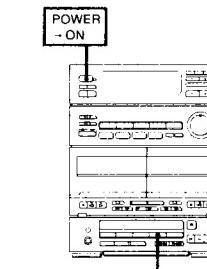
3 Press II again or > at the desired point to play.

One Touch Play

Press CD when the power is turned off.
If a disc has been inserted, you can listen to the disc without pressing any other buttons. If not, you can turn on the system but cannot start play.

Playing Repeatedly — Repeat Play

You can choose between two different repeat play modes. One repeats all the selections in the current mode; the other repeats any given selection. This operation is not possible with the remote commander.



To repeat all the selections
Press REPEAT once during play so that "REPEAT" appears in the display.



To repeat a single selection
Press REPEAT twice while playing the desired selection so that "REPEAT 1" appears in the display.
(Operable only in normal play and delete play mode)



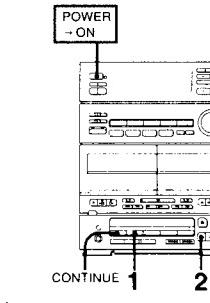
To cancel repeat play

Press REPEAT so that neither "REPEAT" nor "REPEAT 1" appears.

Note
Repeat play function works also during:
• shuffle play
• delete play
• delete shuffle play
• program play
Multi-disc program play (see page 11) cannot be repeated

Playing in a Random Order — Shuffle Play

Shuffle play function plays all selections in a random order.
This operation is not possible with the remote commander.

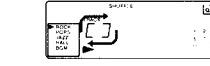


Make sure that CD is selected before going to the following steps.

1 Press SHUFFLE.
"SHUFFLE" appears in the display.



2 Press >.
"I" appears and then shuffle play starts.



To stop playing
Press ■.

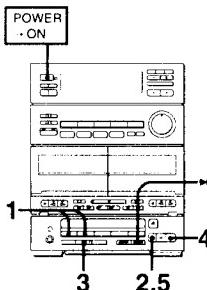
To cancel shuffle play
Press CONTINUE.
"SHUFFLE" disappears, and play continues in normal play mode.

CD Playing (Continued)

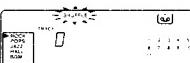


Playing Only the Desired Selections — Delete Play

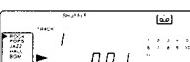
You can delete unwanted selections and play the remaining selections either in normal or shuffle play mode. This operation is not possible with the remote commander.



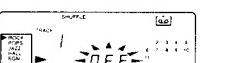
1 Press SHUFFLE or CONTINUE.
"SHUFFLE" appears in the display only if you have pressed SHUFFLE; that is, the unit is now engaged in shuffle play mode.



2 Press >>
Shuffle or normal play starts.



3 Press CLEAR while unwanted selections are being played.
The number of the selection and "OFF" appears in the display when the selection is deleted.

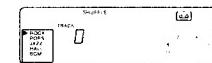


To skip selections

Press >>> (or >>> on the remote commander). These selections are just skipped but not deleted.

4 Press ■ after deleting all the unwanted selections.

All the selection numbers which you have not deleted appear in the display.



5 Press >>.

- If "SHUFFLE" is displayed, the remaining selections are played in shuffle play mode. (Delete shuffle play)
- If "SHUFFLE" is not displayed, the remaining selections are played in normal play mode. (Delete play)

To restore all the selections you have deleted
Press ■ in stop mode.

Playing in a Desired Order — Program Play

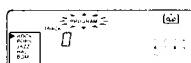
You can make a program by designating up to 24 selections in the order you want them to be played, while checking the total playing time.

This operation is not possible with the remote commander.



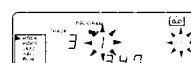
1 Press PROGRAM.

"PROGRAM" appears in the display.



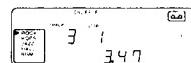
2 Press <<<< or >>>> to choose a selection.

The total playing time is displayed. If it is satisfactory, go to the next step. If not, choose another selection instead.



3 Press PROGRAM while the selection number is flashing.

The selection is chosen and the selection number turns to light.



4 Repeat steps 2 and 3 to program other selections.

5 Press >>.

All the programmed selections are played in the programmed order.

To program a pause

Press II.
"P" appears and the total playing time is reset to 0:00.

To stop play

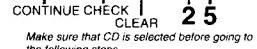
Press ■.
To restart the same program play, press >>.

To cancel the program play

Press CONTINUE.
The program is erased and the play continues in normal play mode.

To check the program

Press CHECK.
Each time you press CHECK, the number of the selection and the order to be played appear in the display. After the last selection is displayed, "END" appears in the display.



Make sure that CD is selected before going to the following steps

1,3 Continue CHECK

2,5 CLEAR

Make sure that CD is selected before going to the following steps

To erase a selection

1 Press CHECK so that the number of the selection you wish to erase appears in the music calendar. You cannot erase the selection being played.

2 Press CLEAR

To erase the entire program

Press ■ once in stop mode; twice during play. The program is also erased when you turn off the system.

- If "—, —, —" is displayed instead of the total playing time during programming or during play
- You have programmed a selection the number of which is over 20
- The total time has exceeded 100 minutes

To check the remaining time during play

Press TIME once to see the remaining time of the selection being played; twice to see the total remaining time of the whole program; once more to return to the initial display. If you have inserted a pause, the display shows the remaining time until the pause.

Designating the Playing Order of Up to 6 Discs — Multi-disc Program

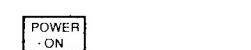
You can make a program by designating up to 24 selections from a maximum of 6 discs in the order you want them to be played. At the same time, you can adjust the total playing time of the program. This function is convenient for editing tapes from different discs.

This operation is not possible with the remote commander.

5 Repeat steps 3 and 4 to program other selections from the first disc.

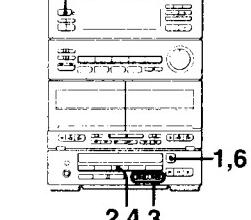
6 Press □ OPEN/CLOSE and remove the first disc and insert the second disc.

"PROGRAM (MULTI)" and "DISC 2" appear in the display.



7 Repeat steps 3 through 6 to program other selections from other discs.

Up to 24 selections from a maximum of 6 discs can be programmed.
The total playing time for all selections appears in the display.



1 Press □ OPEN/CLOSE and insert the first disc.

1,6 Continue CHECK

2,4,3 CLEAR

Make sure that CD is selected before going to the following steps

To stop playing

Press ■.

To check the number of the disc inserted

Press TIME in stop mode.
The number of the disc appears.



To cancel the program play

Press CONTINUE.

To check the program

Press CHECK.

Each time you press CHECK, the number of the disc and the selection appear. After the last selection is displayed, "END" appears in the display.

To erase a selection from the end of the program

- 1 Insert the last disc
 - 2 Press CLEAR.
- Each time you press CLEAR, the last selection is erased from the end of the program.
- If you insert a pause in your program, you cannot erase the selections programmed before the pause.

To erase the entire program

Press ■ once in stop mode; twice during play.

Notes on multi-disc program

- You cannot use the repeat play function.
- Do not insert a pause in your program when you want to use the CD SYNCHRO button.

Notes on handling discs

- To keep the disc clean, handle the disc by its edge. Do not touch the surface.
- Do not stick paper or tape onto the disc.

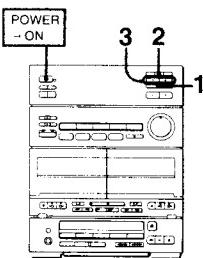


- Do not expose the disc to direct sunlight or heat sources such as a hot air duct, nor leave it in a car parked in direct sunlight as there can be a considerable rise in the temperature.
- After playing, store the disc in its case.

Radio

GB
The automatic tuning enables you to find a station when its signal is strong enough. When the signal is too weak, use the manual tuning.

Automatic Tuning

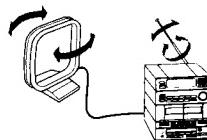


- 1 Press BAND repeatedly until the desired band appears.
As you press BAND, the band changes as follows:

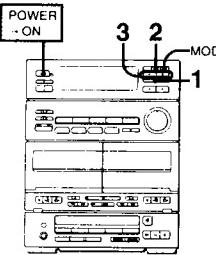
*1 → FM → AM
*2 → FM → MW → LW
*3 → FM → MW → SW

- 2 Press AUTO so that "AUTO" appears in the display.

- 3 Press TUNING - or + repeatedly until the desired station is tuned in.



Manual Tuning



Changing the MW Tuning Interval (Except for Middle Eastern, UK and East European models)

The MW tuning interval is preset at the factory to 9 kHz for E, Tourist and Australian models, and 10 kHz for US and Canadian models. If you use the system where the frequency allocation system is different from the preset interval, change the interval as follows:

- 1 Turn on the power.
- 2 Tune in any MW station.
- 3 Turn off the power.
- 4 Turn the power back on while pressing TUNING +.

To reset the interval, follow the same procedure.

Important

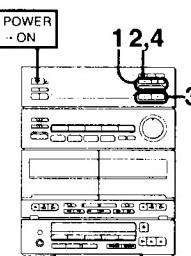
When the interval is changed, stored stations will be erased from the memory.

One Touch Play

Press TUNER when the power is turned off. You can listen to the last received station without pressing any other buttons.

Storing Stations

You can store up to 20 FM stations and 10 MW stations and 10 SW stations in a desired sequence, so that you can tune in the stored station directly by entering the preset station number. This operation is not possible with the remote commander.



- 5 Repeat step 1 to 4 for each station to be stored.

If you cannot store a station successfully
Press MEMORY/NEXT again so that "MEMORY" appears, and then proceed with steps 3 and 4 above.
Be sure to operate while "MEMORY" is on.
(about four seconds.)

When you have selected the wrong preset station number
Press MEMORY/NEXT again and then proceed with steps 3 and 4.

To change the preset station
Store a desired station at the desired preset number by proceeding with the above steps. The station previously preset will be erased. Erasing only is not possible.

Tuning in a Preset Station

- 1 Press BAND and TUNING - or + to tune in the desired station.

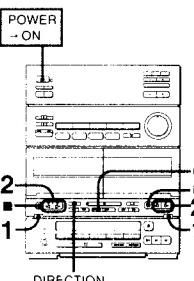
- 2 Press MEMORY/NEXT.
MEMORY and the preset station numbers appear in the display.

- 3 While "MEMORY" is on (for about 4 seconds), press PRESET/TIMER - or + to select a desired preset number.

- 4 Press MEMORY/NEXT.
"MEMORY" disappears, and the station is stored in the preset number.

Tape Playback

Playback Operation



- 1 Press Δ and insert a tape in deck A or B.

- 2 Press \triangleright (for front side playback) or \triangleleft (for reverse side playback). Playback starts.

To stop playback
Press ■.

To stop for a moment during play
(Deck B only)
Press ■ PAUSE.
To resume play, press it again.

How to select the DIRECTION mode position

To playback one side, set it to \triangleleft .
To play back both sides, set it to $\triangleright\triangleleft$. (The deck stops automatically after repeating the sequence 5 times.)
To playback both decks in succession, set it to RELAY. See "Playing Both Decks in Succession — Relay Play" on page 14.
The DIRECTION mode setting is effective for both decks.

If you play both decks at the same time
You hear the sound from deck A.

(to be continued)

*1: Only for US, Canadian, Italian and Germany models.
*2: Only for AEP, East European and UK models.
*3: Only for E, Saudi Arabia, Australian, Malaysia, Singapore and Tourist models.

Tape Playback (continued)

(continued)



When listening to the tape recorded with the Dolby noise reduction system*
Set the DOLBY NR selector to ON. The setting is active for both decks. This system is provided with the Dolby B NR system.

What is the Dolby NR system?
Dolby NR (noise reduction) system reduces tape hiss noise in low-level high-frequency signals. The system boosts these signals during recording and lowers them during playback.

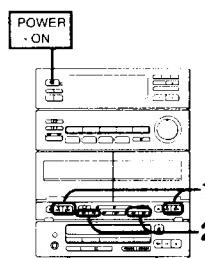
* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and double-D symbol DD are trademarks of Dolby Laboratories Licensing Corporation.

One Touch Play

Press TAPE when the power is turned off. If a tape has been inserted, you can listen to the tape without pressing any other buttons. If not, you can turn on the system but cannot start playback.

Locating the Beginning of a Selection during Playback — Automatic Music Sensor (AMS)

The AMS locates the beginning of a selection by detecting the blank spaces between selections. To assure correct operation of the AMS, there must be a three-second blank or more between selections. By using the CD synchronized recording (Fade Edit, Time Edit, Just Edit, and Program Edit), you can make three-second blanks among recorded selections.



1 Press ▶ or ◀ to start playback.

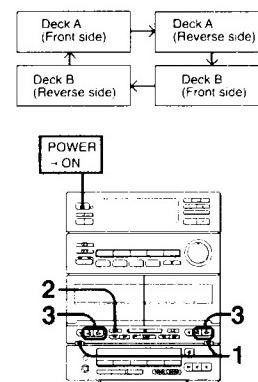
2 Press ▶▶ or ◀◀ referring to the following table.

Side of the cassette being played	Desired selection	
	Next selection	Selection being played
Front side (▶)	▶▶	◀◀
Reverse side (◀)	◀◀	▶▶

- Notes:**
- AMS does not function on both decks at the same time.
 - AMS does not function while the other deck is being played.

Playing Both Decks in Succession — Relay Play

Relay play always follows the sequence below regardless of where playback starts. When playback of the reverse side of the tape in deck B is over, the following sequence continues 4 more times.



1 Press ▲ and insert recorded tapes in both decks.

2 Set the DIRECTION mode selector to RELAY.

3 Press ▶ or ◀ on either deck.

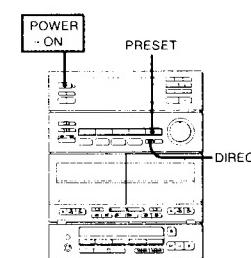
To stop relay play

Press ■ on the playing deck.

Using the Graphic Equalizer

Making Use of the Preset Equalizer Settings

When the system is shipped from the factory, five specially recommended settings of the graphic equalizer are stored. You can enjoy the effect of the equalizer by simply choosing from these five preset settings according to the program source.



Press PRESET to select the preset equalizer setting, referring to the table as shown below.

Display	Applications
1 ROCK	For rock
2 POPS	Vocal sound is intensified
3 JAZZ	For jazz
4 HALL	For orchestral music
5 BGM	For background music

When you select a setting, the display shows the equalizer curve as shown below.



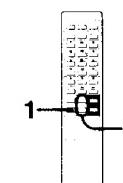
When you do not want to apply the equalizer effect

Press DIRECT so that "DIRECT" appears in the display and the indicator lights up.

Adjusting the Bass and Treble Sound

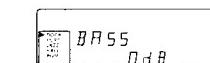
This function allows you to adjust the sound by raising and lowering the level of bass and/or treble sound. This operation is possible only with the remote commander.

Note:
You cannot store the sound adjusted with BASS and TREBLE.



1 Press BASS/TREBLE so that "BASS" or "TRE" appears with the decibel indication in the display.

Each time you press the button, the display switches to show cyclically "BASS" or "TRE". Select "BASS" to adjust lower frequency ranges and "TRE" to adjust higher frequency ranges.



2 Press BASS/TREBLE + or - to adjust the level.

BASS/TREBLE + Increase the decibel indication to enhance the level

BASS/TREBLE - Decrease the decibel indication to reduce the level.



To confirm the effect of the adjustment (This is not possible if you adjust the bass/treble effect while the DIRECT indicator is on)
Press DIRECT.

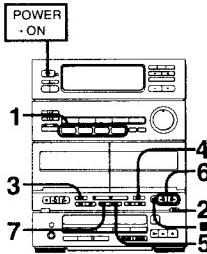
You can compare the difference between the adjusted sound (the DIRECT indicator is off) and no equalizer and bass/ treble effect sound (the DIRECT indicator is on).

Recording

GB

Recording Operation (Deck B)

Use TYPE I (normal) or TYPE II (CrO₂) tapes for recording.



1 Select a program source you want to record with the function selecting buttons.

2 Press Δ and insert a blank tape into deck B.

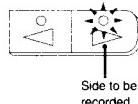
3 Set the DIRECTION mode selector. To record one side, set it to \rightarrow . To record both sides, set it to \leftrightarrow .

4 Set to DOLBY NR switch to ON or OFF.

5 Press \bullet REC. Deck B enters the recording pause mode.



6 If the desired direction indicator is not lighted, select the side to be recorded. Press \triangleright (for front side recording) or \triangleleft (for reverse side recording).



7 Press \bullet PAUSE. Recording pause mode is released and recording starts.



8 Play the source selected in step 1.

Tape Dubbing

To stop recording

Press .

- Notes:**
- Even if you set the DIRECTION mode selector to \leftrightarrow , recording stops at the end of the reverse side. To record on both sides, be sure to start with the front side.
 - The recording level is fixed and cannot be adjusted manually.
 - Equalizer effect cannot be recorded.

Notes on Cassettes

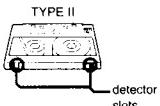
To protect the recording
Break off the tab on the left shoulder on the cassette side of which recording is to be protected.



To re-record the cassette
Cover each opening with plastic tape.

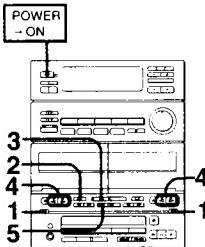


When using a type II (CrO₂) cassette, be careful not to cover the detector slots which are necessary for automatic tape type detection.



Dubbing the Whole Tape at High Speed

This operation is not possible with the remote commander.



1 Press Δ , and insert a recorded tape in deck A and a blank tape in deck B.

2 Set the DIRECTION mode selector.
To dub on one side: set it to \rightarrow .
To dub on both sides: set it to \leftrightarrow .
(See "DIRECTION mode setting" on the next page.)

3 Press HIGH SPEED DUBBING.
Deck B enters recording pause mode.



4 Choose the same direction on both decks by pressing \triangleright or \triangleleft .
To dub on one side, choose \triangleright or \triangleleft .
To dub on both sides, choose \triangleright .

5 Press \bullet PAUSE.
Dubbing starts.



6 To stop dubbing
Press ■ on deck B.

DIRECTION mode setting

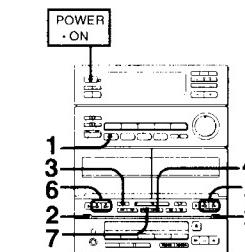
Position	Operation
\rightarrow	Dubbing stops at the end of the tape
\leftrightarrow	When the tape in one deck comes to its end of the front side, it reverses immediately regardless of the tape position in the other deck.
RELAY	When the tape in one deck reaches its end of the front side, it stops until the other tape come to its end, and then both tape reverse together.

When dubbing starts from the reverse side in RELAY mode
At the end of the reverse side, dubbing stops automatically

Is it necessary to set DOLBY NR?
No. The tape in deck B is automatically recorded in the same state as the tape in deck A.

If the indicator on the HIGH SPEED DUBBING button flashes 3 times and disappears
The tab(s) of the cassette inserted into deck B has (have) been removed. Dubbing is not possible on that cassette. Cover the opening with plastic tape.

Manual Dubbing



1 Press TAPE (or FUNCTION repeatedly on the remote commander). "TAPE" appears in the display.

2 Press Δ and insert a recorded tape in deck A and a blank tape in deck B.

3 Set the DIRECTION mode selector.
To dub on only one side: set it to \rightarrow .
To dub on both sides: set it to \leftrightarrow .

4 Press \bullet REC.
Deck B enters recording pause mode.



5 If the desired direction indicator is not lighted, select the side to be recorded on the deck B.
Press \triangleright (for front side recording) or \triangleleft (for reverse side recording).

6 Press \triangleright or \triangleleft on deck A.
Playback starts.

7 Press \bullet PAUSE.
Normal speed dubbing starts.

To stop dubbing
Press ■ on both decks.

Is it necessary to set DOLBY NR?
No. The tape in deck B is automatically recording in the same state as the tape in deck A.

GB

Is it possible to listen to program sources other than tape during dubbing?
During high speed dubbing, yes. Any program source can be selected.
During manual dubbing, no. The source changes to the selected function and the tape playback cannot be dubbed.

CD Recording

GB

Fading Out at the Designated Time — Time Fade

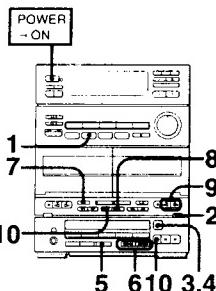
You can have the disc play fade out at the end by designating the playing time so that the selection at the end of the tape fades out naturally without breaking abruptly in the middle.

How Time Fade functions

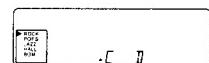
Deck B records the selections in the order they appear on the disc. Five seconds before the designated time, the recording level falls gradually. At the designated time, the recording ends and the CD player enters pause mode. This function works for both sides of the tape by designating the time once. This function works also during repeat, shuffle, and program play.

Time Fade operation

This operation is not possible with the remote commander



- 1 Press CD.
"CD" appears in the display.



- 2 Press Δ and insert a blank tape into deck B.

- 3 Press Δ OPEN/CLOSE and place a disc.

- 4 Press Δ OPEN/CLOSE again to close the tray.

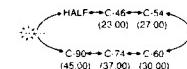
Note:
Make sure that the total number of selections and the total playing time appear in the display.

- 5 Press EDIT three times.
"TIME FADE" appears in the display.



- 6 Press $\langle\langle$ or $\gg\rangle\rangle$ to designate the tape length.

You can use a 46-, 54-, 60-, 74-, or 90-minute cassette tape. As you press these buttons, the minute display changes as follows.



When you choose "HALF"

The CD player fades out after playing just the half of the total playing time of the disc.

- 7 Set the DIRECTION mode selector.
To record on one side, set it to \square .
To record on both sides, set it to $\square\square$.

- 8 Press \bullet REC.
Deck B enters recording pause mode.



- 9 If the desired direction indicator on play button is not lighted, select the side to be recorded on deck B.
Press \triangleright (for front side recording) or \triangleleft (for reverse side recording).

- 10 Press \bullet PAUSE on deck B and \bullet on the CD player.
Recording pause mode is released, CD playing starts, and recording starts.

To stop recording

Press \blacksquare on deck B and \blacksquare on the CD player.

- When playback ends
The CD player fades out and enters pause mode at the designated time.
"TIME FADE B" appears in the display. Deck B reverses automatically if you set the DIRECTION mode selector to $\square\square$.

If you also want to record on the reverse side of the cassette, press \triangleright on the CD player after the tape reverses.
When recording on the reverse side fades out and ends, the CD player enters the pause mode and the Time Fade is canceled.

- To cancel Time Fade
During stop, press EDIT so that "TIME FADE" disappears.

When the playback of the disc ends during Time Fade
Time Fade is still active. If you place another disc, the recording can be continued and will fade out when the total playing time of the discs reaches the designated time.

To check the remaining time during Time Fade
When you press TIME twice, the remaining time until the designated time is displayed.

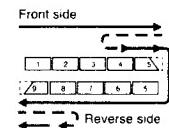
If you press $\langle\langle$ or $\gg\rangle\rangle$:
Time Fade will be canceled.

Recording the Entire Program on a Disc — Fade Edit

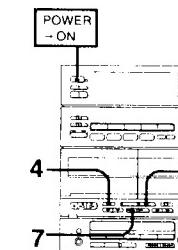
CD program playback and tape recording start simultaneously due to the Synchronized Start function. The selection at the end of the tape does not break abruptly in the middle, but fades out automatically (Fade Edit). By recording with Fade Edit, you can make three-second blanks among the selections on the recorded tape.

How Fade Edit functions
Deck B records the selections in the order on the disc. If the tape ends in the middle of the selection, deck B rewinds the tape to the beginning of that selection. Then the selection is recorded so that it fades out naturally at the end of the tape.

If the recording is to be continued to the reverse side, the selection that has faded out on the front side is recorded again from the beginning on the reverse side.



- Fade Edit operation
This operation is not possible with the remote commander



- To stop recording
Press \blacksquare on deck B or \blacksquare on the CD player.

Note:
When the tab on the cassette has been removed, the CD SYNCHRO button does not operate.

Is it possible to listen to program sources other than CD during CD recording?
No. If you select another function, the CD play stops and the selected function will be recorded.

Editing the CD for Recording

The CD player automatically edits the selections on a disc according to the tape length. There are two ways of editing: Time Edit and Just Edit.
By recording with Time Edit and Just Edit, you can make three-second blanks among the selections on the recorded tape.

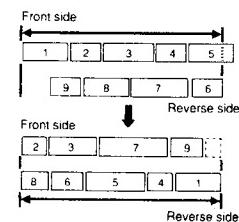
- How Time Edit functions
The CD player selects the selections so that the total recording time of the selections is within the designated tape length and so that the order of the selections changes as little as possible. This function is convenient when you know the available recording length of the tape.

The CD player selects the selections from the first one in the disc, summing up each playing time. When the total playing time exceeds the designated tape length, the last selection is eliminated and replaced with another selection which is not longer than the remaining time. The eliminated selection is recorded on the reverse side. If you do not want to miss recording some specific selections, you can select them beforehand.

How Just Edit functions

The CD player chooses the selections so that the total recording time of the selections is within the designated tape length and so that you can record as many selections as possible by changing the order of the selections. This function is convenient when you want to record as many selections as possible.

The CD player selects the selections so that the total playing time best fits length of side A. Then the player selects from the remaining selections to record on side B. If you do not want to miss recording specific selections, you can select them beforehand.



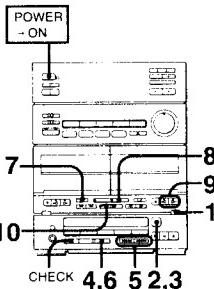
Note:
You can edit only the selections from selection numbers 1 to 20 in the disc using Time Edit and Just Edit.

- If the desired direction indicator on play button is not lighted, select the side to be recorded by pressing \triangleright or \triangleleft .
To record on the front side or on both sides, press \triangleright .
To record only on the reverse side, press \triangleleft .

- Press \bullet PAUSE.
The recording starts. After about 10 seconds, the CD playback starts.

CD Recording (continued)

GB
Time Edit and Just Edit operations
This operation is not possible with the remote commander.



1 Press **▲** and insert a blank tape into deck B.

2 Press **△ OPEN/CLOSE** and place a disc.

3 Press **△ OPEN/CLOSE** to close the tray.

Note:
Make sure that the total number of selections and the total playing time appear in the display.

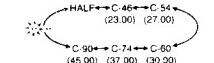
4 Press **EDIT** and display "EDIT" (Time Edit) or "JUST EDIT".

To choose Time Edit, press **EDIT** once.
To choose Just Edit, press **EDIT** twice.



5 Press **◀◀◀◀** or **▶▶▶▶** to designate the tape length.

You can use a 46-, 54-, 60-, 74-, or 90-minute cassette tape. As you press these buttons, the minute display changes as follows:



When you choose "HALF" during Time Edit

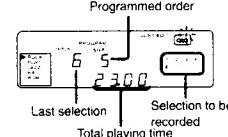
The CD player divides the selections in the disc between side A and side B without changing their order and plays them so that no selection is left out of the recording.

When you choose "HALF" during Just Edit

The CD player programs the selections by changing their order so that the recording time on one side of the tape is half the total playing time. However, the program of side A may be a little longer than that of side B because the CD player distributes all the selections of the entire disc.

6 Press **EDIT**.

The selections to be recorded on one side are determined automatically. Then the display shows:



For recording on both sides

Press **EDIT** again.
The selections to be recorded on the other side are determined.

To add selections (Link function)

If there is remaining time after adding all the selections on the disc, "LINK" and the selection numbers that can be recorded within the remaining time flash in the display. You can add these selections to the program. When you want to record the selections of another disc, replace the disc. The selection numbers that can be recorded flash in the same way

- Press **EDIT**.
All the selections that can be recorded are programmed.

7 Set the **DIRECTION** mode selector.

To record on one side, set it to **◀**.
To record on both sides, set it to **◀◀**.

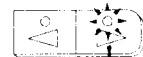
8 Press **CD SYNCHRO**.

Deck B enters recording pause mode.



9 If the desired direction indicator on play button is not lighted, select the side to be recorded by pressing **▶** or **◀** on deck B.

To record on the front side or on both sides, press **▶**.
To record only on the reverse side, press **◀**.



10 Press **II PAUSE**.

The recording starts. After about 10 seconds, the CD playback starts.

To stop recording

Press **■** on deck B or **■** on the CD player.

To select the desired selections beforehand

You can place priority on some selections to be recorded by selecting them first using the program function of the CD player (see page 10) before performing Time Edit or Just Edit.

To check the program

Press **CHECK**.

In the display window, "A" appears while checking the program for side A, and "B" appears while checking the program for side B.

Notes:

- Time Edit and Just Edit do not function when you program more than 20 selections on one disc.
- Do not press any other buttons than those mentioned in the procedure during Time Edit or Just Edit.
- When the tab on the cassette has been removed, the CD SYNCHRO button does not operate.

If it takes time for programming during Just Edit

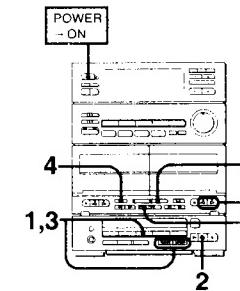
For some discs with many selections, it may take a while for programming. In this case, press **■**. Programming procedure is stopped, but you can get the program though the program length is not the same as you have designated.

To use the CD synchronized recording function with more than one disc

Use the multi-disc program function (page 11). Press **CD SYNCHRO** and **II PAUSE** each time you change the disc.

Programming the Selections while Checking the Total Playing time — Program Edit

You can adjust the total playing time to the tape length while making a program. By recording with Program Edit, you can make three-second blanks among the selections on the recorded tape.



1 Program desired selections for side A. (See page 10, "Playing in a Desired Order — Program Play.")

Note:
Make sure that "A" is lit in the display.

2 Press **II** on the CD player

"P" appears in the display and the total playing time is reset to 0. "B" lights up.



3 Program desired selections for side B. (See page 10, "Playing in a Desired Order — Program Play.")

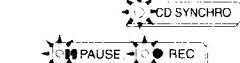
4 Set the **DIRECTION** mode selector.

To record on one side, set it to **◀**.

To record on both sides, set it to **◀◀**.

5 Press **CD SYNCHRO**.

Deck B enters recording pause mode.



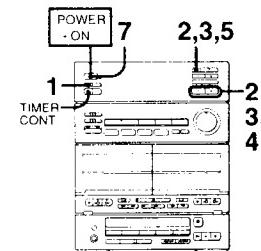
Timer-Activated Operation

The power can be turned on and off automatically so that you can record a radio program while you are out, wake up to music, etc. The preset timer-on and off time remain until you reset them or you disconnect the power cord. So, you do not have to set the timer every day to wake up to music. (However, the timer setting for recording a radio program is good for only once.)

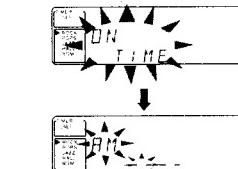
Before setting the timer

- Make sure the clock is set correctly. (See page 7.)
- If you want to record a radio program, be sure to insert a tape long enough.

Setting the Timer

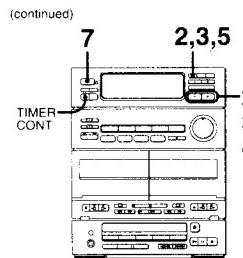


1 Press **TIMER SET**.
"ON TIME" appears and the hour digits flash in the display.

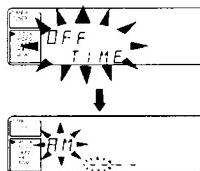


(to be continued)

Timer-Activated Operation (continued)



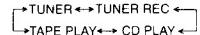
2 Set the hour and minute of the timer-on time by pressing PRESET/TIMER – or +, and MEMORY/NEXT. "OFF TIME" appears and the hour digits flash again.



3 Set the hour and minute of the timer-off time by pressing PRESET/TIMER – or +, and MEMORY/NEXT. The program source flashes.



4 Select the program source by pressing PRESET/TIMER – or +. As you press the button (– or +), the source changes as follows:



To listen to the radio:

- 1 Press MEMORY/NEXT. The frequency display appears.
- 2 Press BAND to select the desired band.
- 3 Press PRESET/TIMER – or + to select the desired station.

To record a radio program

- 1 Press MEMORY/NEXT. The frequency display appears.
- 2 Press BAND to select the desired band.
- 3 Press PRESET/TIMER – or + to select the desired station.
- 4 Insert a tape in deck B.

5 Set the DIRECTION mode selector correctly.
To record on one side, set it to .
To record on both sides, set it to .

To listen to a tape: go to step 5.

To listen to CD:
1) Press MEMORY/NEXT. The selection number display appears.
2) Press PRESET/TIMER – or + to choose the desired selection.
(Only from selection numbers 1 to 20)

5 Press MEMORY/NEXT.
The preset items appear sequentially.

6 Prepare the program source by inserting a disc or a tape.
• For listening to the radio:
You have nothing to do in this step.
• For listening to a tape
Insert the tape in deck A or B.
• For listening to CD
Insert a disc.

7 Press POWER to turn off the system.
At the timer-on time, the system turns on automatically.
If you set the timer for TUNER REC in step 4, the VOLUME control automatically turns to MIN soon after the power is turned on at the timer-on time.

Note
Timer setting is possible when the power is turned off; however, it is necessary to turn on the power for inserting a disc.

To change timer settings

- 1 Press TIMER SET
The timer-on hour flashes.
- 2 Press MEMORY/NEXT until the item to be changed flashes.
- 3 Press PRESET/TIMER – or + to change the item to the desired one.
- 4 Press MEMORY/NEXT until the timer-on time appears.

The display, then shows the preset items sequentially, and return to the previous display.

When you do not want to operate the timer

Press TIMER CONT (control) so that "TIMER" disappears from the display.
To reactivate the timer, press TIMER CONT to display "TIMER."

When the power is already on at the preset time

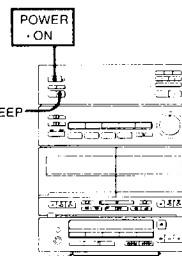
The function will be automatically changed to the preset one, even if you are playing a program of another function.

On the recording side of a tape during timer recording.

Playback or recording always starts from the front side. When you want to record on one side, be sure that the side you want to record on is facing you when you insert it.

Sleep Timer Operation

By setting the sleep timer, the system power can be turned off after the preset duration (up to 90 minutes).



Press SLEEP during play to select the desired duration in minutes.
As you press SLEEP, the indication changes as follows:



To disengage the sleep timer
Set the timer to .

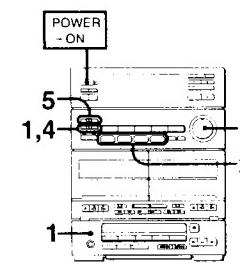
To turn off the system before the system is turned off by the sleep timer
Press POWER.

To check the remaining time before the sleep timer turns off the system
Press SLEEP once, and the remaining time appears in minutes. The display returns to the previous indication automatically after several seconds.

(*2) Microphone Mixing

(*1) Singing Along

Mixing Operation



(*1) **1** Slide the MIC LEVEL control to the MIN position to turn down the microphone control level and connect a microphone to the MIX MIC jack.

2 Press one of the function selecting buttons (or FUNCTION repeatedly on the remote commander) to select program source and play it.

3 Sing or speak into the microphone.

(*1) **4** Slide the MIC LEVEL control to the right to adjust microphone level.

(*1) **5** Slide the ECHO control to adjust echo level.

6 Adjust the VOLUME control.

When the mixing is over (*1)
Be sure to disconnect the microphone and set the microphone level to the minimum level with the MIC LEVEL control.

Recording the sound mixed with a source

- 1 Mix the sound as described above
- 2 Insert a tape in deck B
- 3 Start recording

Recording from the microphone only

- 1 Press CD (or FUNCTION repeatedly on the remote commander) to select the CD player. If a CD is being played, press ■ to stop playing.
- 2 Start recording

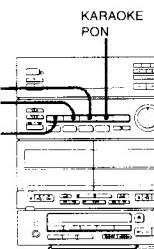
To stop howling (acoustic feedback)

Placing the microphone too close to the speakers may cause howling. Move the microphone away from the speakers or change the direction it faces.

Singing Along with Multiplex Tapes



This feature can be made use of when you enjoy singing along with microphone connected to the system, while playing back a multiplex tape.



To sing along with a multiplex tape
Press either MAIN or SUB according to your multiplex tape.
You can choose from:
• hearing only the instrumental music, or
• hearing only the singer's voice in the tape, along with your voice through the microphone.

To hear both channel sounds
Press STEREO

Note
This function is not used at the same time with vocal reduction (KARAOKE PON).

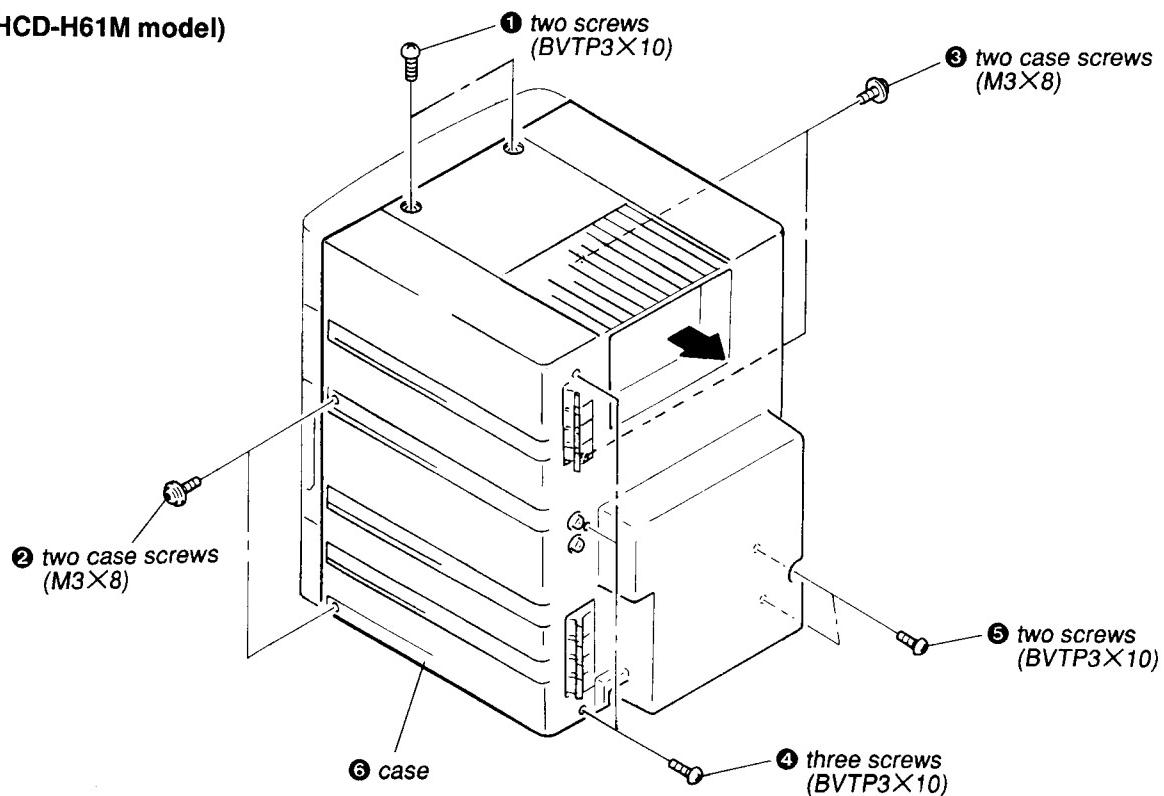
What is a multiplex tape?
Instrumental music and vocals were recorded separately on the right channel and on the left channel. Therefore, when playing back a tape, instrumental music comes from one speaker and vocals come from the other speaker separately.

SECTION 3 DISASSEMBLY

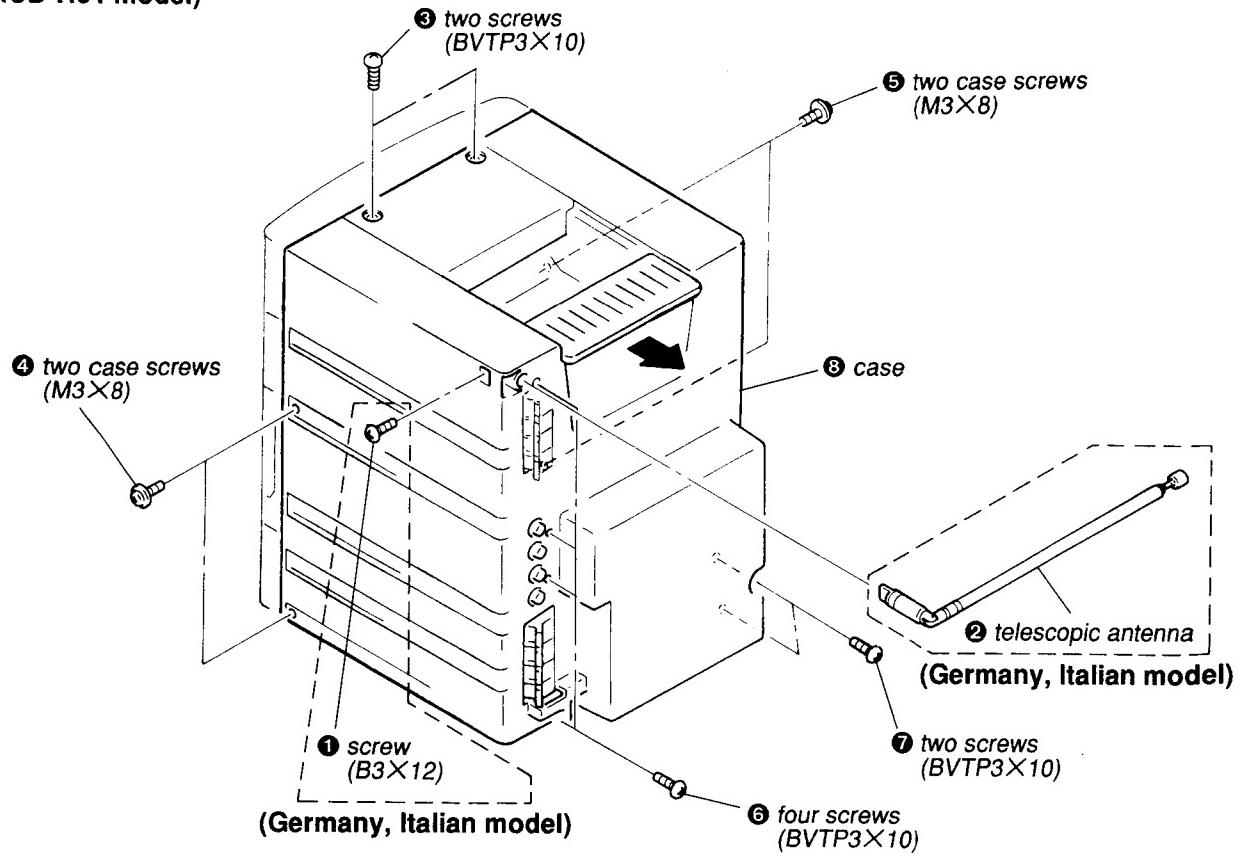
NOTE: Follow the disassembly procedure in the numerical order given.

3-1. CASE REMOVAL

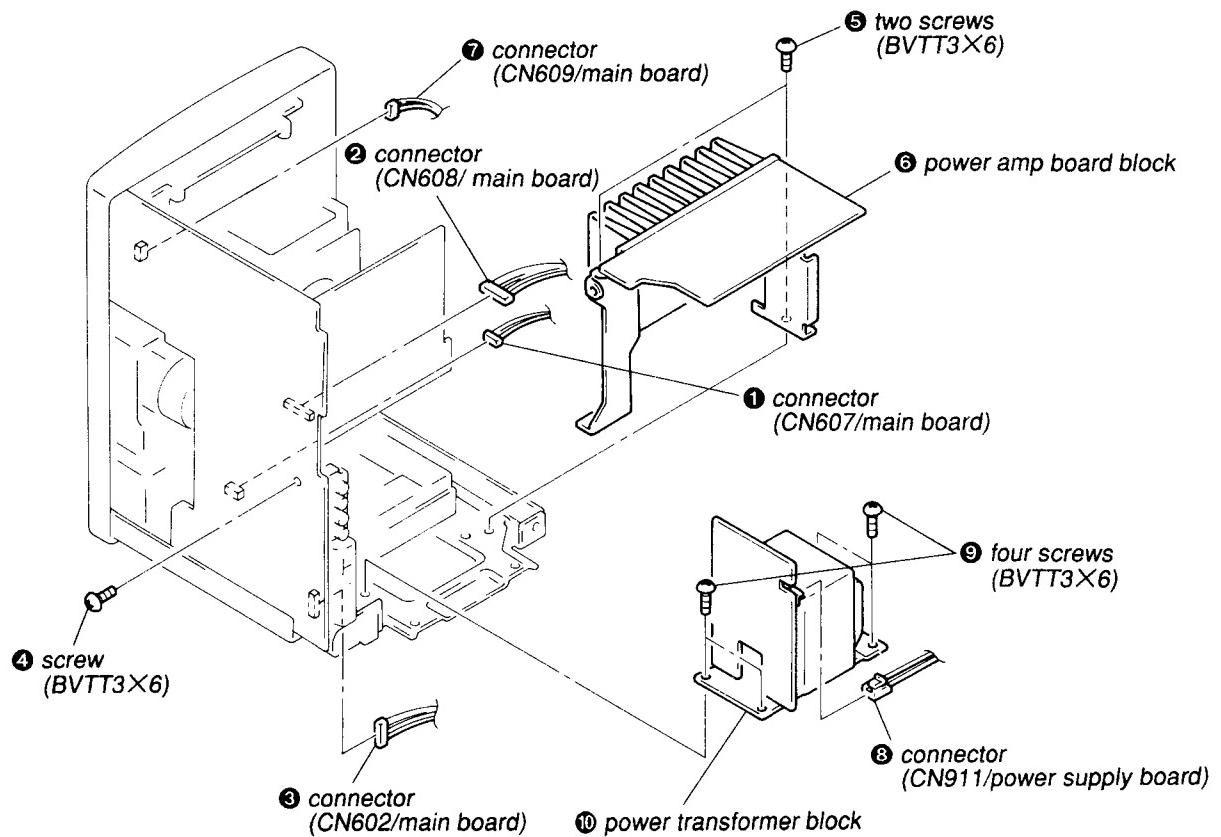
(HCD-H61M model)



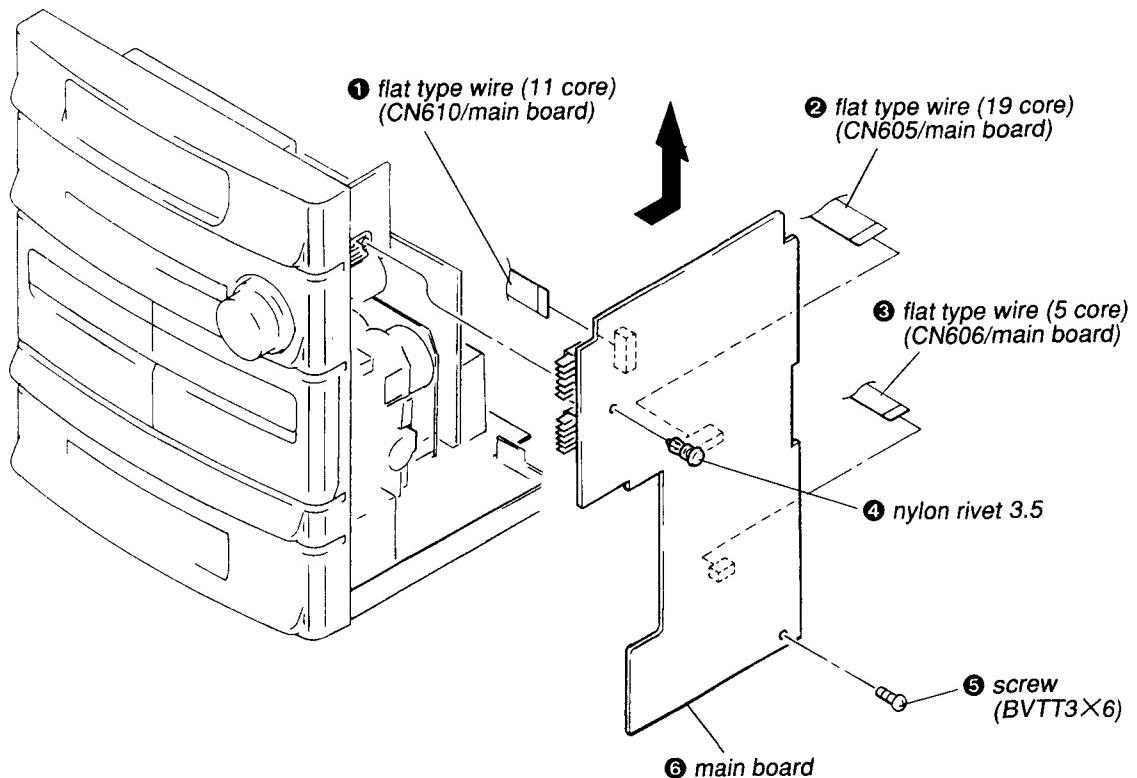
(HCD-H61 model)



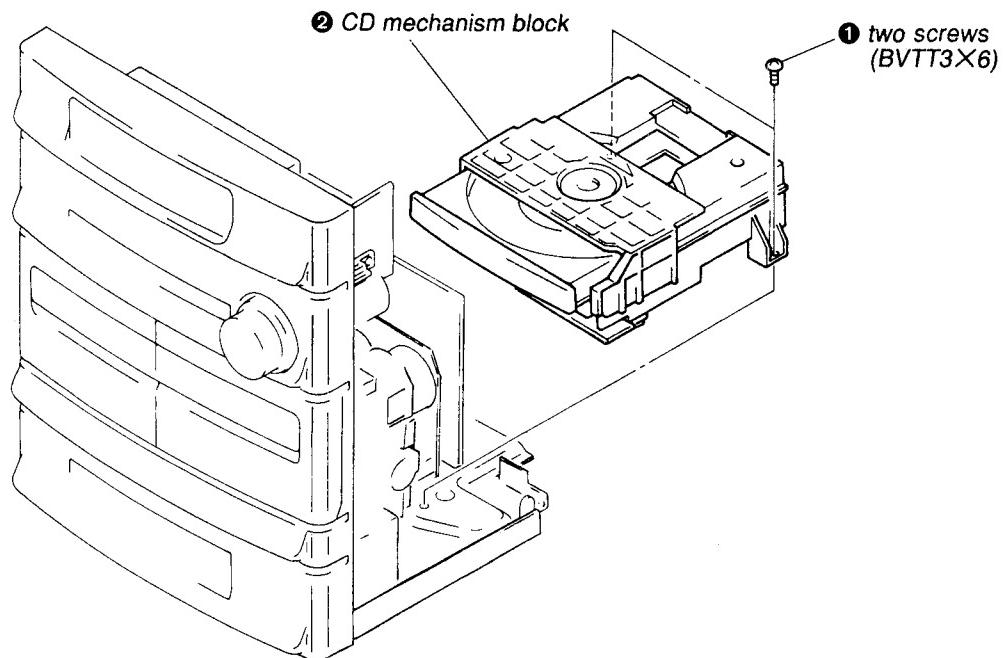
3-2. POWER BLOCK REMOVAL



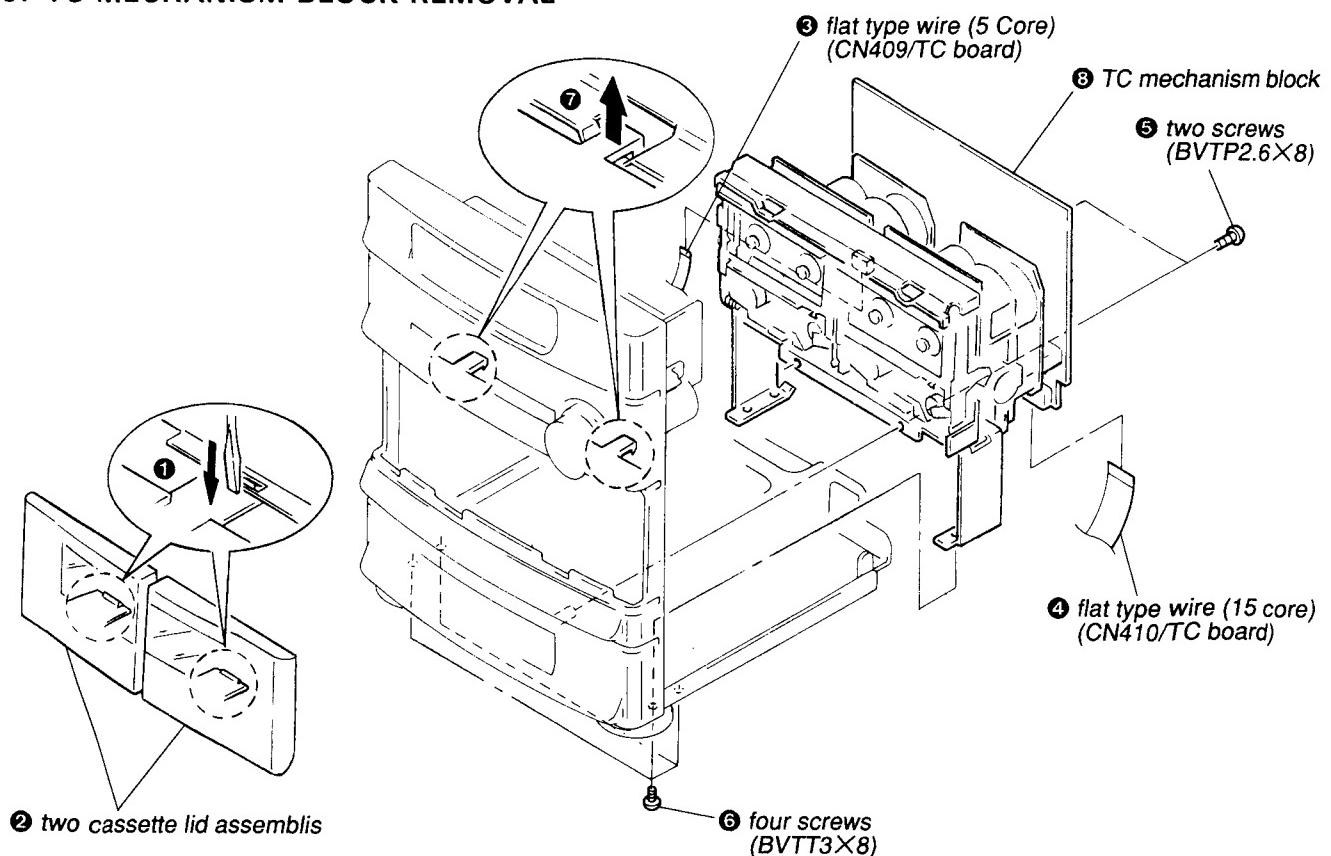
3-3. MAIN BOARD REMOVAL



3-4. CD MECHANISM BLOCK REMOVAL



3-5. TC MECHANISM BLOCK REMOVAL



SECTION 4 MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured alcohol-moistened swab:

record/playback head	pinch roller
erase head	rubber belt
capstan	idler
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustment.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustment should be performed with the rated power supply voltage unless otherwise noted.

• Torque Measurement

Torque	Torque meter	Meter reading
Forward	CQ-102C	35 to 60g · cm (0.49 to 0.83oz · inch)
Forward back tension	CQ-102C	2 to 6g · cm (0.028 to 0.08oz · inch)
Reverse	CQ-102RC	35 to 60g · cm (0.49 to 0.83oz · inch)
Reverse back tension	CQ-102RB	2 to 6g · cm (0.028 to 0.08oz · inch)
FF / REW	CQ-201B	70 to 110g · cm (0.98 to 1.52oz · inch)

SECTION 5 ELECTRICAL ADJUSTMENTS

DECK SECTION

1. The adjustment should be performed in the publication. (Be sure to make playback adjustment at first.)
2. The adjustment and measurement should be performed for both L-CH and R-CH.
 - Switch position
DOLBY NR switch : OFF
3. Prior to electrical adjustments, short the connector CN401 (test mode).

• Test Tape

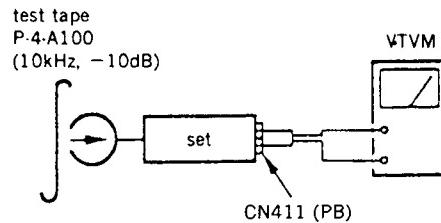
Tape	Contents	Use
P-4-A100	10kHz, -10dB	Head Azimuth Adjustment
P-4-L300	315Hz, 0dB	Level Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment

Record/Playback Head Azimuth Adjustment

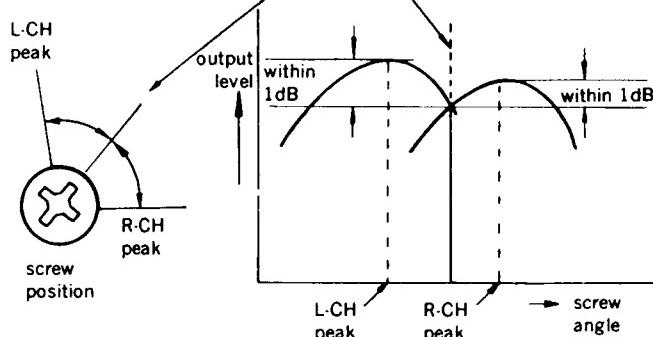
DECK A **DECK B**

Procedure :

1. Forward Playback Mode
Reverse Playback Mode

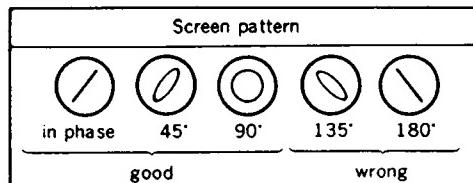
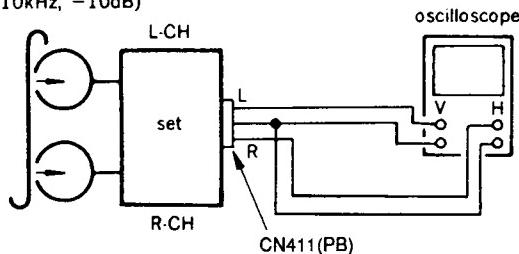


2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1dB.



3. Playback Mode

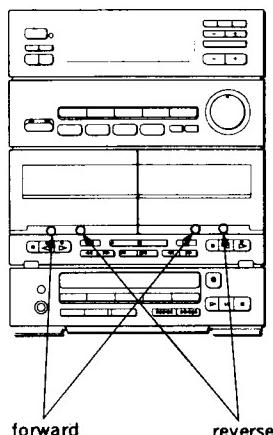
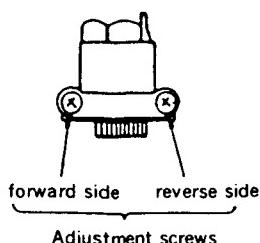
test tape
P-4-A100
(10kHz, -10dB)



4. Change the review playback mode and repeat the steps 1 to 3.
5. After the adjustment, lock the adjustment screw with suitable locking compound.

Adjustment Location :

—record/playback head (deck A and B)

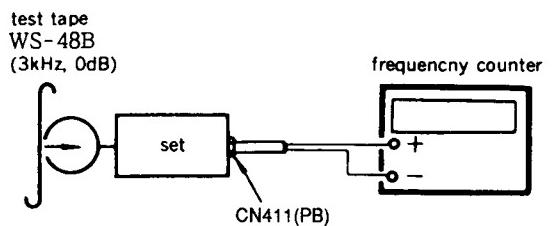


Tape Speed Adjustment DECK A DECK B

Procedure :

- Perform high speed adjustment before normal speed adjustment.

Mode : playback



Speed	Deck	Adjustment	Frequency counter
* High	A	RV72	5,970 to 6,030Hz
	B	RV72	
Normal	A	RV71	2,985 to 3,015Hz
	B	RV71	

* Continue to press HIGH SPEED DUBBING switch (S557) in playback mode : High speed playback.

Frequency difference between the begining and the end of the tape should be within $\pm 3\%$.

Frequency difference between deck A and deck B the beginning of the tape should be within 1.5%.

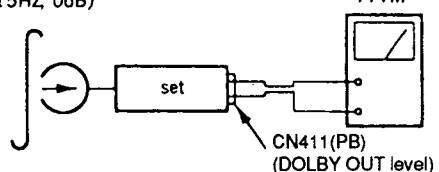
Adjustment Location: MD (AX) and MD (BX) boards.

Playback Level Adjustment DECK A DECK B

Procedure :

Mode : playback

test tape
P-4-L300
(315Hz, 0dB)



Deck A is RV11 (L-CH) and RV21 (R-CH), deck B is RV11 (L-CH) and RV21 (R-CH) so that adjustment within adjustment level as follows.

Adjustment Level :

LINE OUT level : $-12.7 \pm 1.0\text{dB}$ (0.16 to 0.20V)
Level Difference between Channels : within 0.5dB

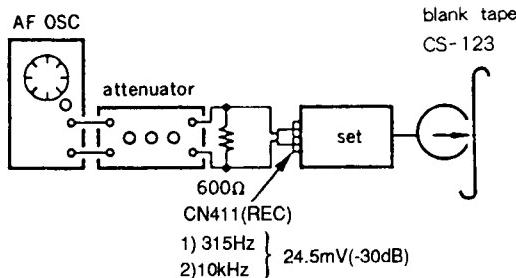
Confirm the DOLBY OUT level does not change in playback mode while changing the mode from playback to stop several times.

Adjustment Location : MD (AX) and MD (BX) boards

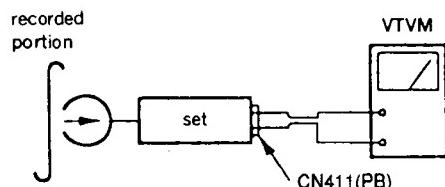
Record Bias Adjustment DECK B

Procedure :

1. record mode



2. playback mode



Confirm playback the signal recorded in step 1 become adjustment level as follows.

If these levels do not adjustment level, adjusment the RV12 (L-CH) and RV22 (R-CH) to repeat step 1 and 2.

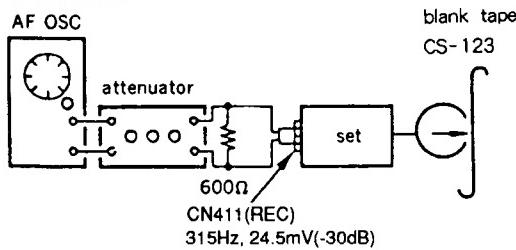
Adjustment level : Playback output of 315Hz to playback output of 10kHz : -0.5dB to 0.5dB.

Adjustment Location : MD (BX) board

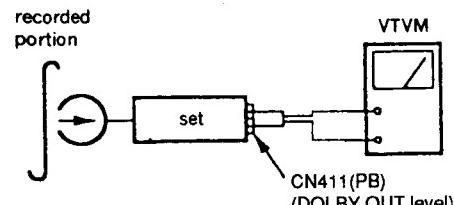
Record Level Adjustment DECK B

Procedure :

1. record mode



2. playback mode



Confirm playback the signal recorded in step become adjustment level as follows.

If these levels do not adjustment level, adjusment the RV103 (L-CH) and RV203 (R-CH) to repeat step 1 and 2.

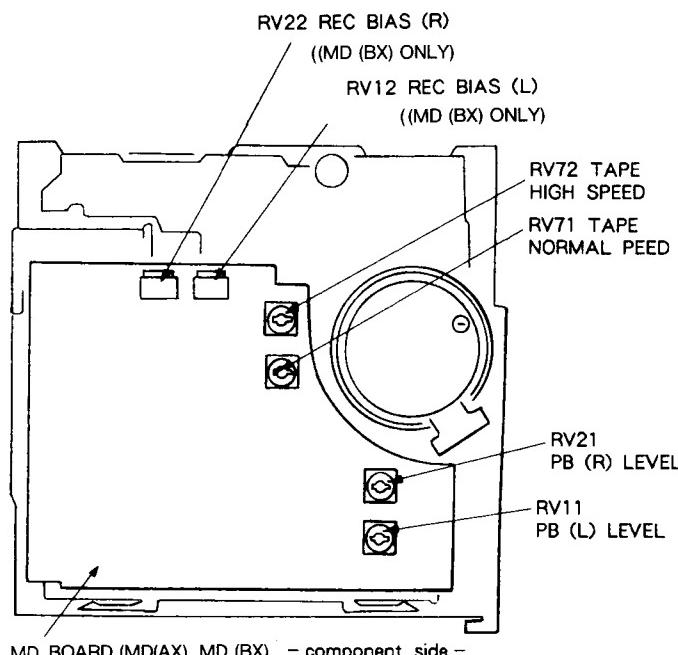
Adjusment Level :

DOLBY OUT level: $-39.0\text{dB} \pm 0.5\text{dB}$ (8.2 to 9.2mV)

Adjustment Location : TC board

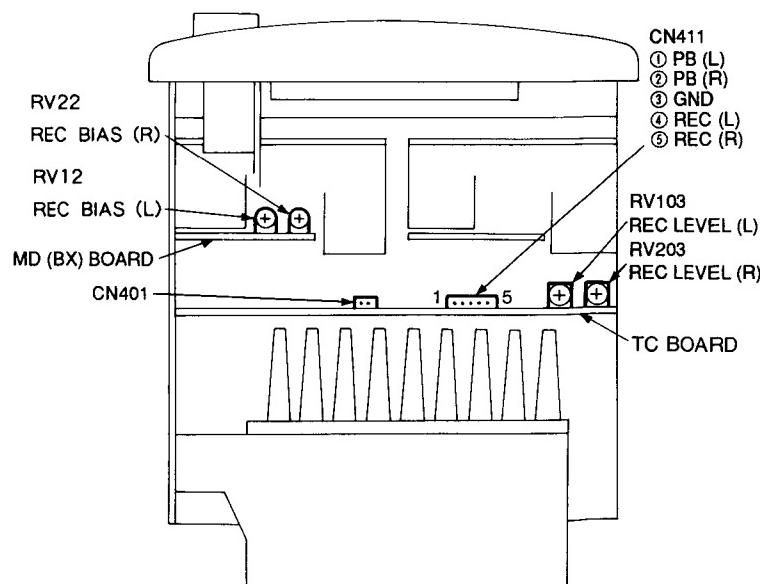
Adjustment Location :

Mechanism deck – rear side –



MD BOARD (MD(AX), MD (BX)) - component side -

TC board – component side –



CD SECTION

Note :

1. CD Block basic adjustment. The indicated.
2. Use YEDS-18 indicated.
3. Use the oscilloscope.
4. Clean an object with a detergent when value with the

S-Curve Check

BD board
TP (F)
TP (V)

- Procedure :**
1. Connect oscilloscope to BD board.
 2. Connect between two points by lead wire.
 3. Turned Power (actuate the front and out.)
 4. Check the S-curve waveform symmetrical between peak level with

S-curve waveform



5. After check, re-

- Note :**
- Try to make the ratio
 - Take sweep the bright

RF Level Check

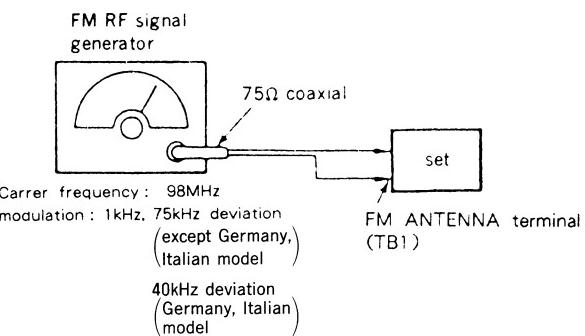
BD
TP
TP

TUNER SECTION

Note : As a front-end (FE1) is difficult to repair if faulty, replace it with new one.

FM SECTION ADJUSTMENTS

Setting :



FM Tuned Indication Lighting Level Adjustment

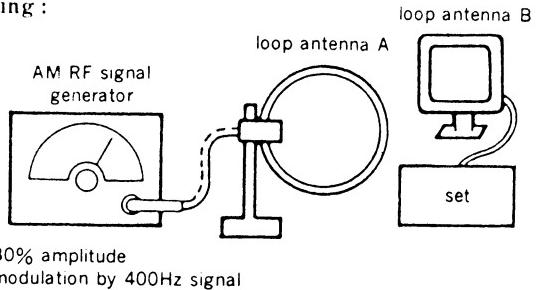
Band : FM

Procedure:

1. Germany, Italian model:
Supply a $11\mu V$ ($21dB\mu$) 98MHz signal from the ANTENNA terminal.
except Germany, Italian model:
Supply a $13\mu V$ ($23dB\mu$) 98MHz signal from the ANTENNA terminal.
2. Tune the set to 98MHz.
3. Adjust RV1 so that the [TUNED] light up.
4. Germany, Italian model:
Confirm that the [TUNED] light off with FM RF signal generator output level set at $18dB\mu$.
except Germany, Italian model:
Confirm that the [TUNED] light off with FM RF signal generator output level set at $20dB\mu$.

AM SECTION ADJUSTMENTS

Setting :



SW OSC Voltage Adjustment

Band : SW

Procedure :

1. Connect the VOM to JW693 (OSC).
2. Tune the set to 5.95MHz.
3. Adjust T2 for 0.9 to 1.1V reading on the VOM.
4. Tune the set to 17.90MHz.
5. Adjust CT2 for 8.3 to 8.7V reading on the VOM.

SW Tracking Adjustment

Band : SW

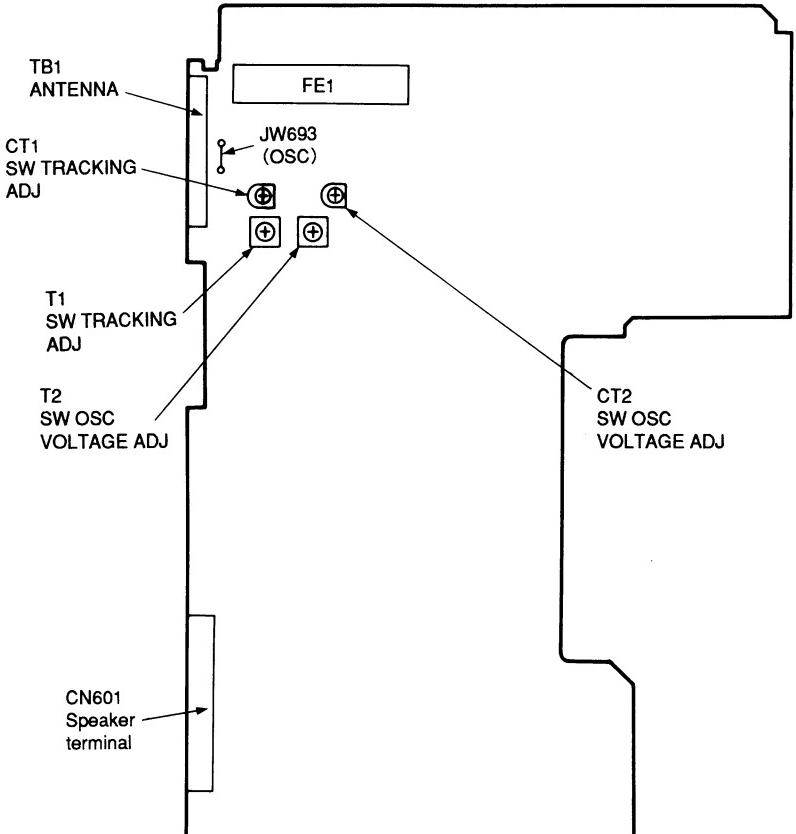
Procedure :

1. Connect the VOM to speaker terminal.
2. Adjust for a maximum reading on VOM (CN601).

Signal generator and Set frequency	Adjustment part
7.0MHz	T1
17.0MHz	CT1

Adjustment Location : main board —component side—

[MAIN BOARD] (COMPONENT SIDE)

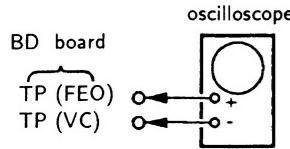


SECTION

Block basically constructed to operate without adjustment. Therefore, check each item in order given. YEDS-18 disc (3-702-101-01) unless otherwise indicated.

the oscilloscope with more than $10M\Omega$ impedance. Scan an object lens by an applicator with neutral detergent when the signal level is low than specified one with the following checks.

e Check

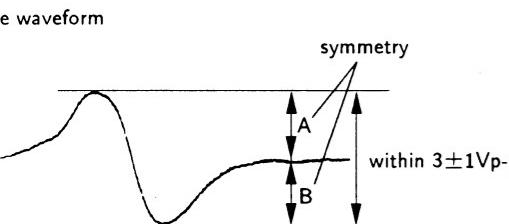


Procedure :
Connect oscilloscope to test point TP (FEO) on BD board.

Connect between test point TP (FES) and TP (VC) with lead wire.

Turn Power switch on and actuate the focus search. (Check the focus search when disc table is moving in and out.)

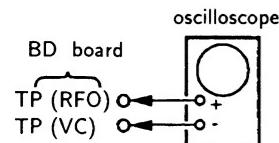
Check the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within $3 \pm 1V_{p-p}$.



After check, remove the lead wire connected in step 2.

- Try to measure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.
- Take sweep time as long as possible and light up the brightness to obtain best waveform.

level Check

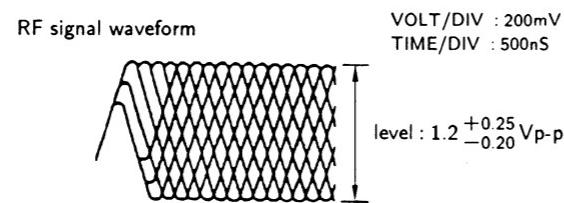


Procedure :

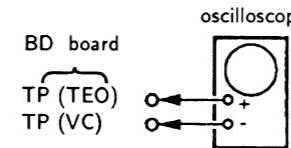
- Connect oscilloscope to test point TP (RFO) on BD board.
- Turn Power switch on.
- Put disc (YEDS-18) in and playback.
- Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

Note :

Clear RF signal waveform means that the shape “◇” can be clearly distinguished at the center of the waveform.



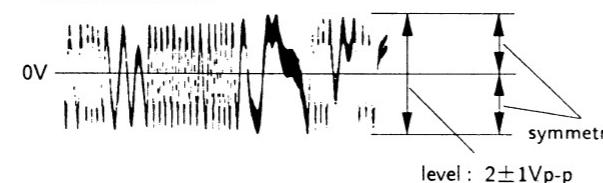
E-F Balance Check



Procedure :

- Connect test point TP (ADJ) to ground and TP (TES) to TP (VC) with lead wire.
- Connect oscilloscope to test point TP (TEO) on BD board.
- Turn Power switch on.
- Put disc (YEDS-18) in and playback.
- Confirm that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0V, and check this level.

Traverse waveform

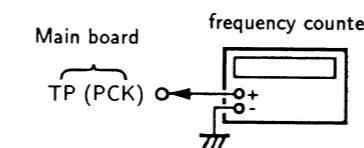


- Remove the lead wire connected in step 1.

RF PLL Free-run Frequency Check

Procedure :

- Connect frequency counter to test point (PCK) with lead wire.



- Turn Power switch on.
- Confirm that reading on frequency counter is 4.3218 MHz.

Focus/Tracking Gain

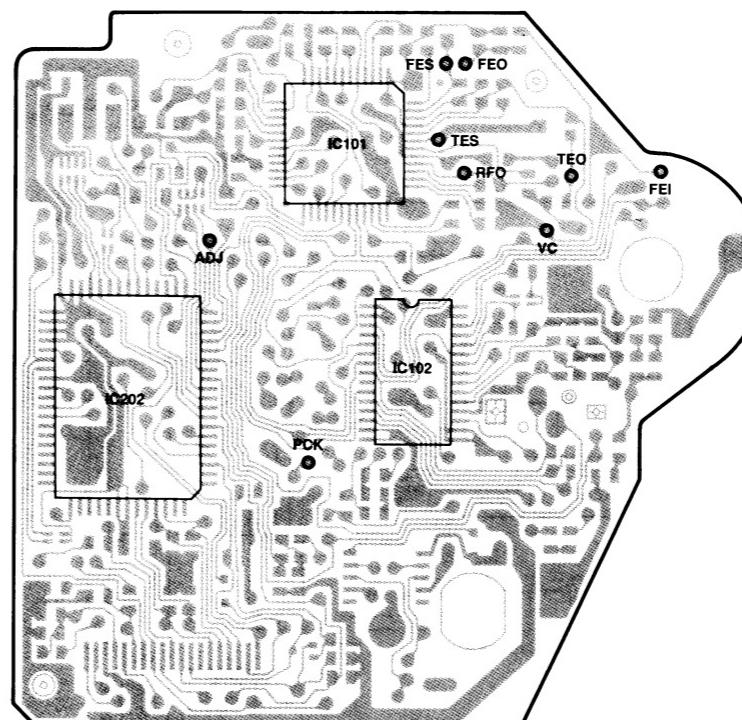
This gain has a margin, so even if it is slightly off. There is no problem.

Therefore, do not perform, this adjustment.

Please note that it should be fixed to mechanical center position when you moved and do not know original position.

Adjustment Location :

【BD BOARD】(SIDE B)

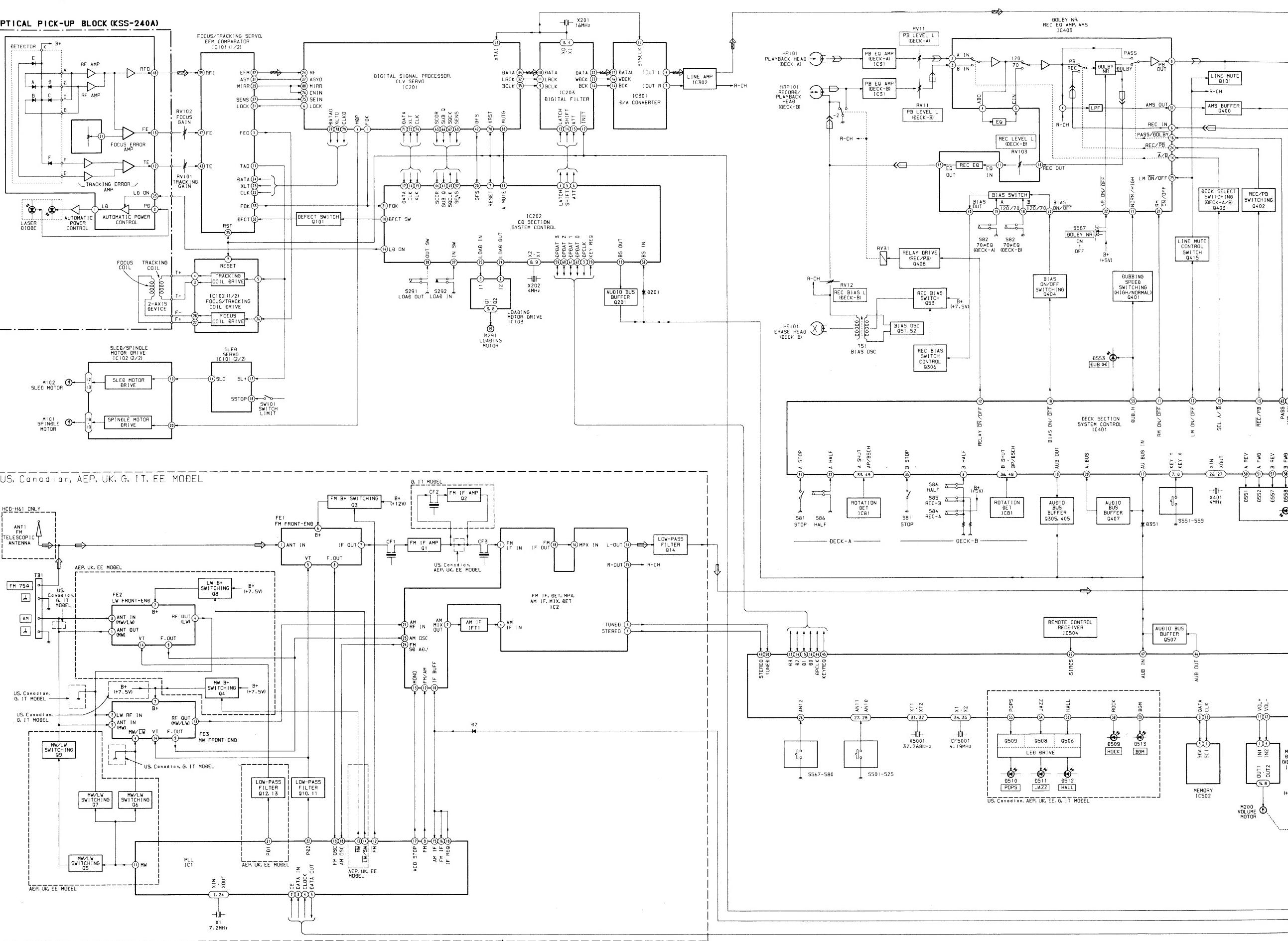


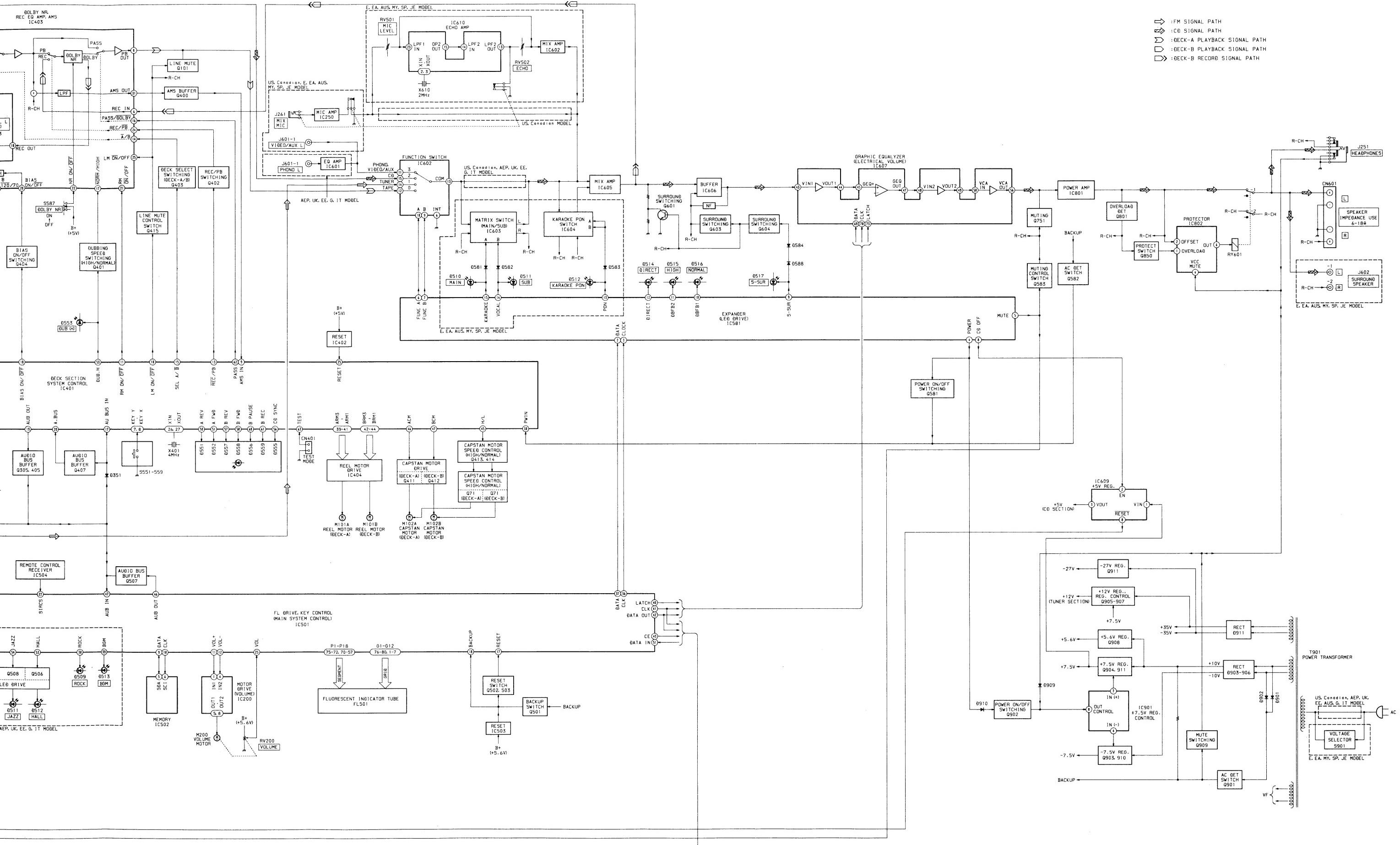
SECTION 6 DIAGRAMS

6-1. BLOCK DIAGRAM

Abbreviations

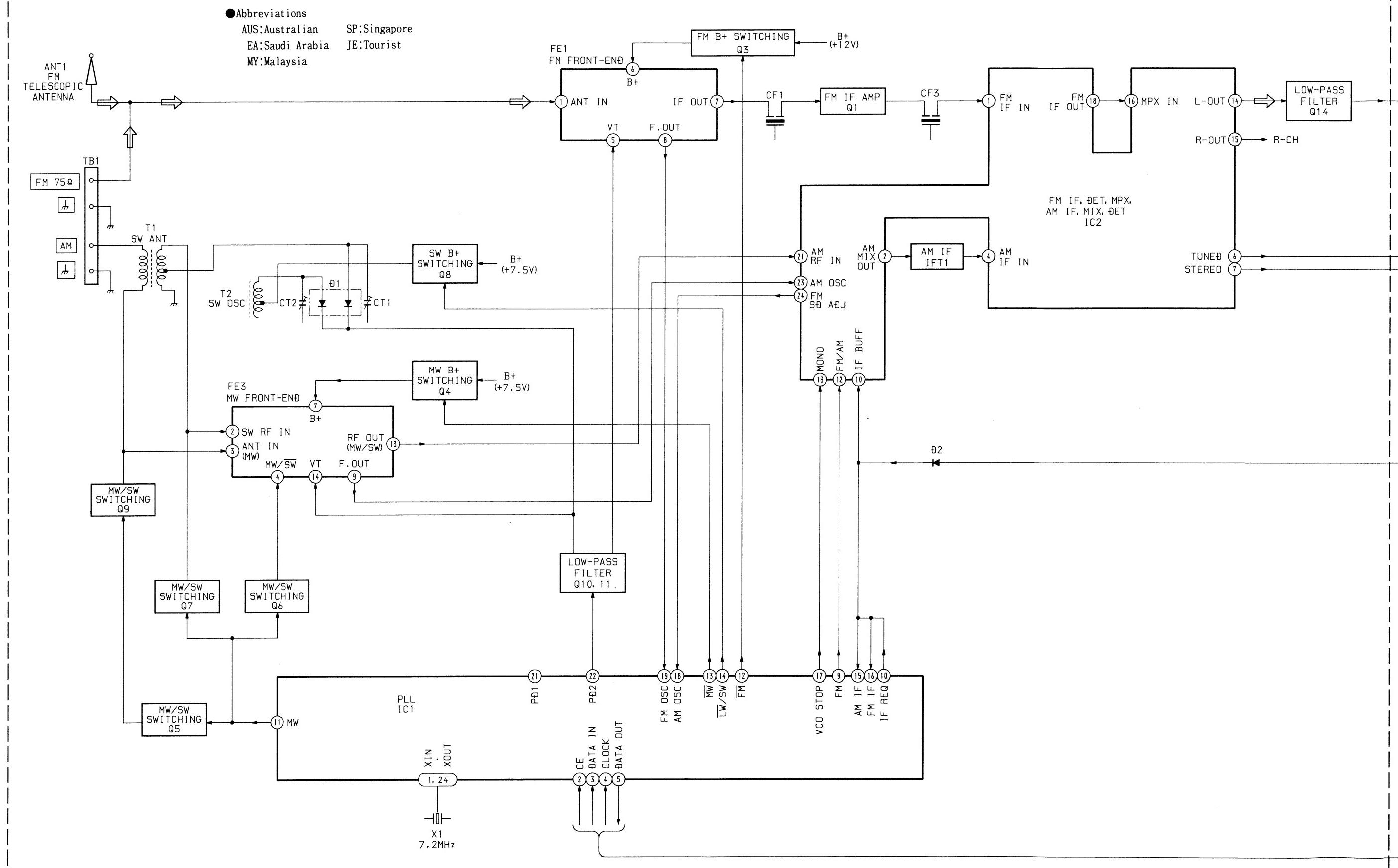
G:Germany
IT:Italian
MY:Malaysia
SP:Singapore
JE:Tourist
AUS:Australian
EA:Saudi Arabia
EE:East European





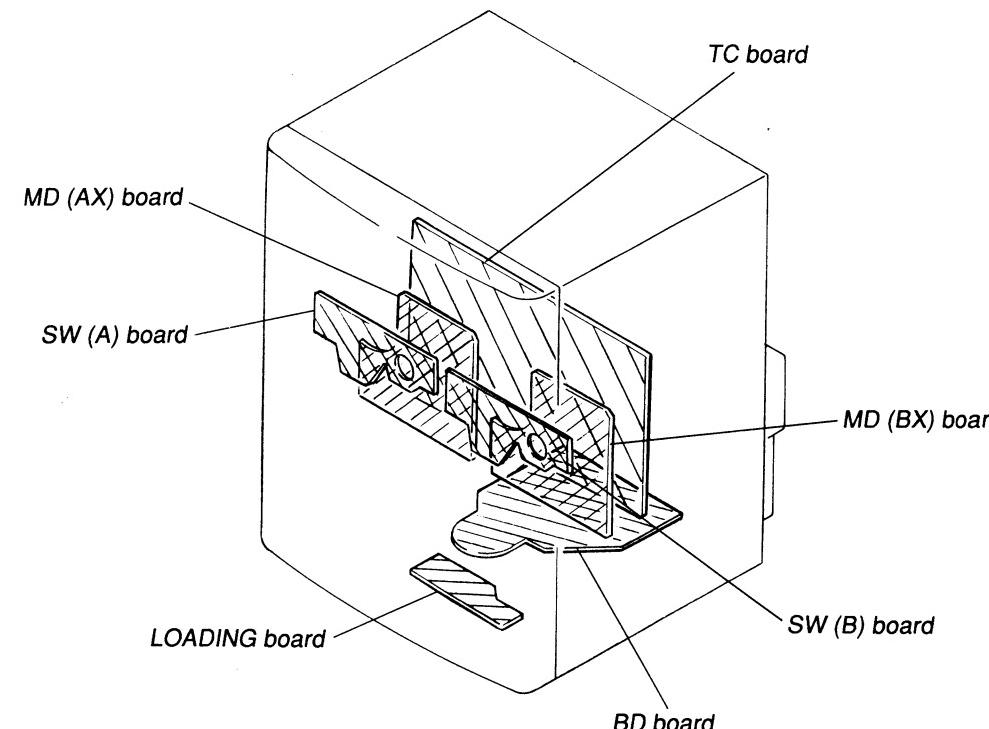
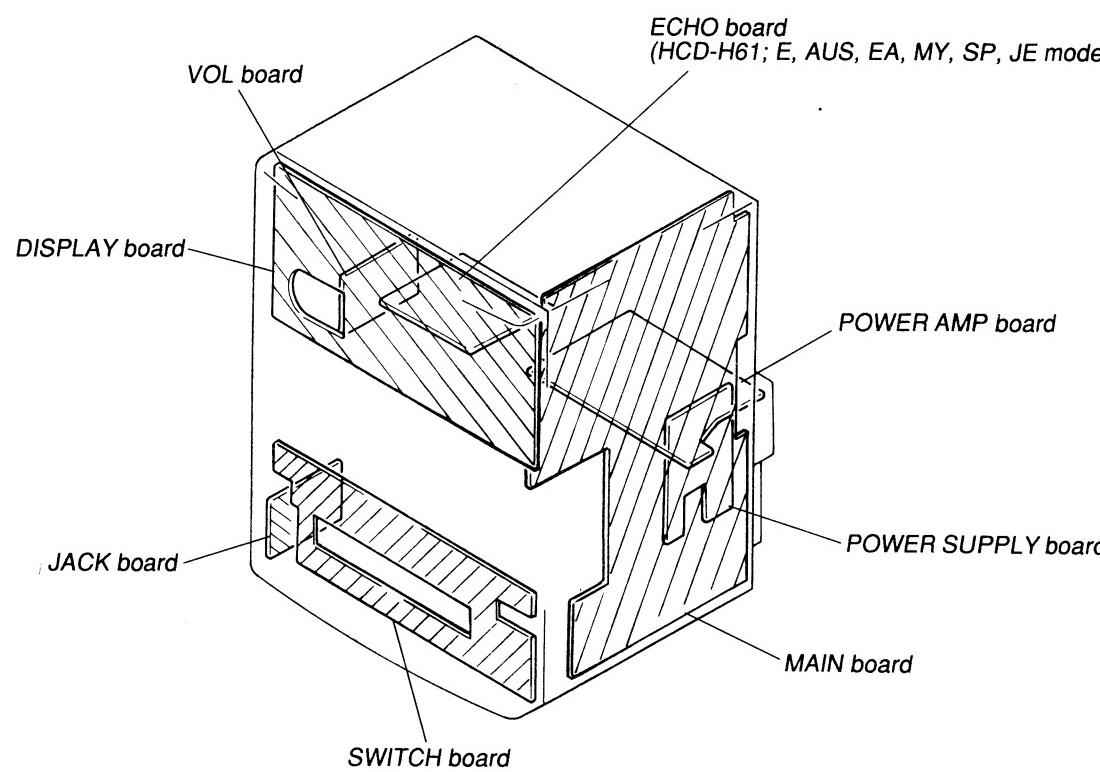
• BLOCK DIAGRAM –TUNER BLOCK–

E, EA, AUS, MY, SP, JE MODEL



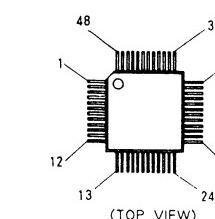
6-2. CIRCUIT BOARDS LOCATION

● Abbreviations	MY:Malaysia
AUS:Australian	SP:Singapore
EA:Saudi Arabia	JE:Tourist

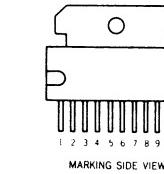


6-3. SEMICONDUCTOR LEAD LAYOUTS

CXA1372AQ



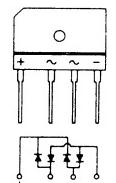
TA7272P



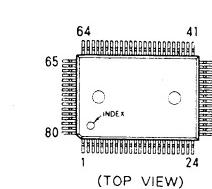
2SA473
2SD2012-LC



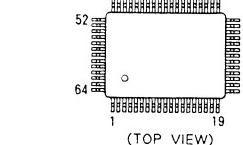
RBA-402



CXD2500BQ



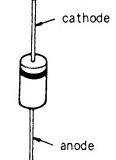
μPD75116GF-F21-3BE



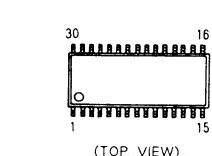
2SK246-GR3



UZL-12L3
1N4148M



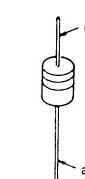
LA6525M



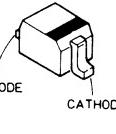
DTA114ES
DTA124ES
DTA144ES
DTC114ES
DTC144ES
2SC2603-EF
2SC2724-CD



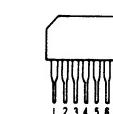
HZS6A1L
HZS6C3L
HZS24-1L
11ES2



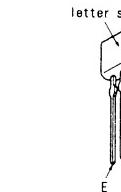
1SS352



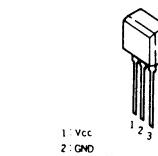
M5230L-A
μPC1237HA



2SA1175-HFE
2SC3623A-LK



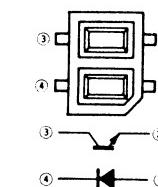
PST572E



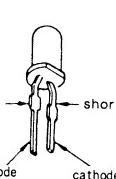
2SB1013-4
2SC1841-PAFAEA
2SC3112-A



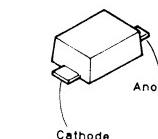
NJL5165K-B



SEL2210S-CD
SEL5220S
SEL5420S
SEL5920A

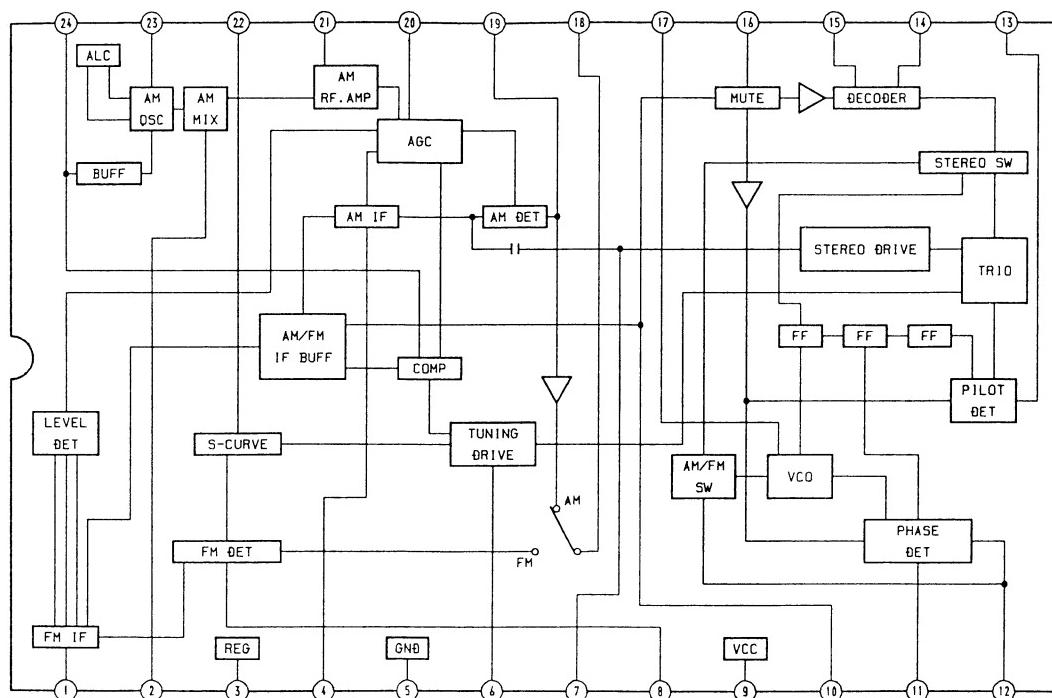


MA8039

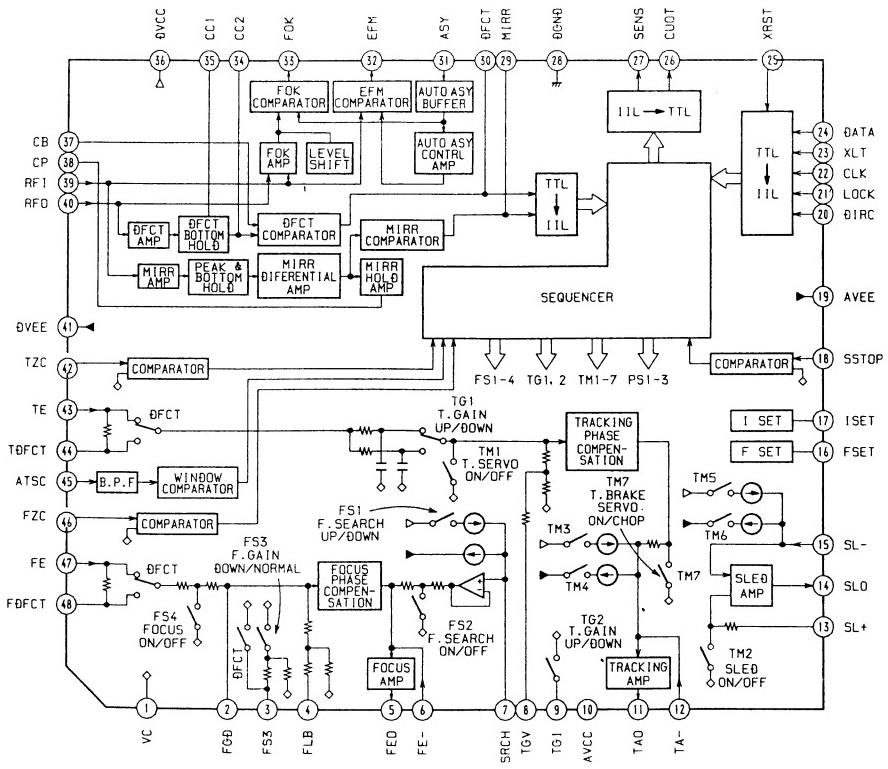


6-4. IC BLOCK DIAGRAMS

IC2 LA1831

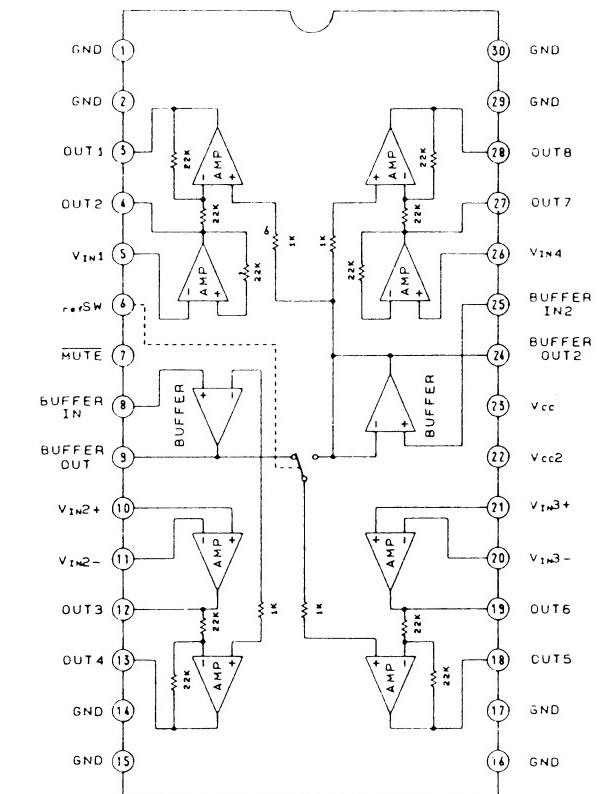


IC101 CXA1372AQ

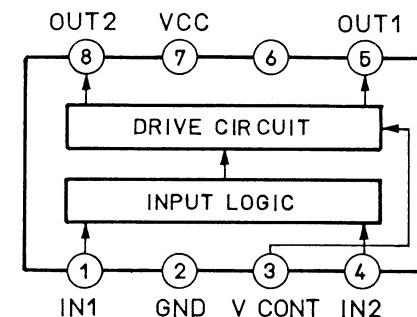


IC102 LA6525M

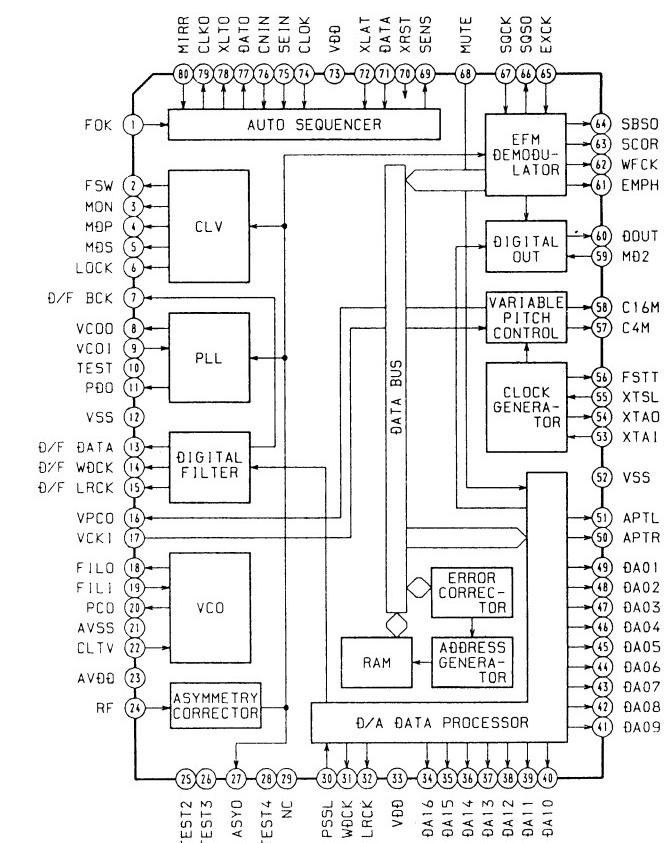
IC103 M54641FP



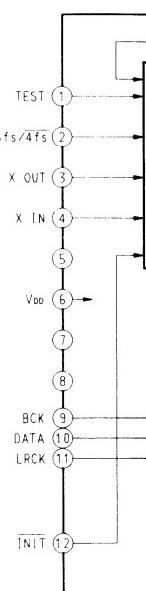
IC200 LB1639

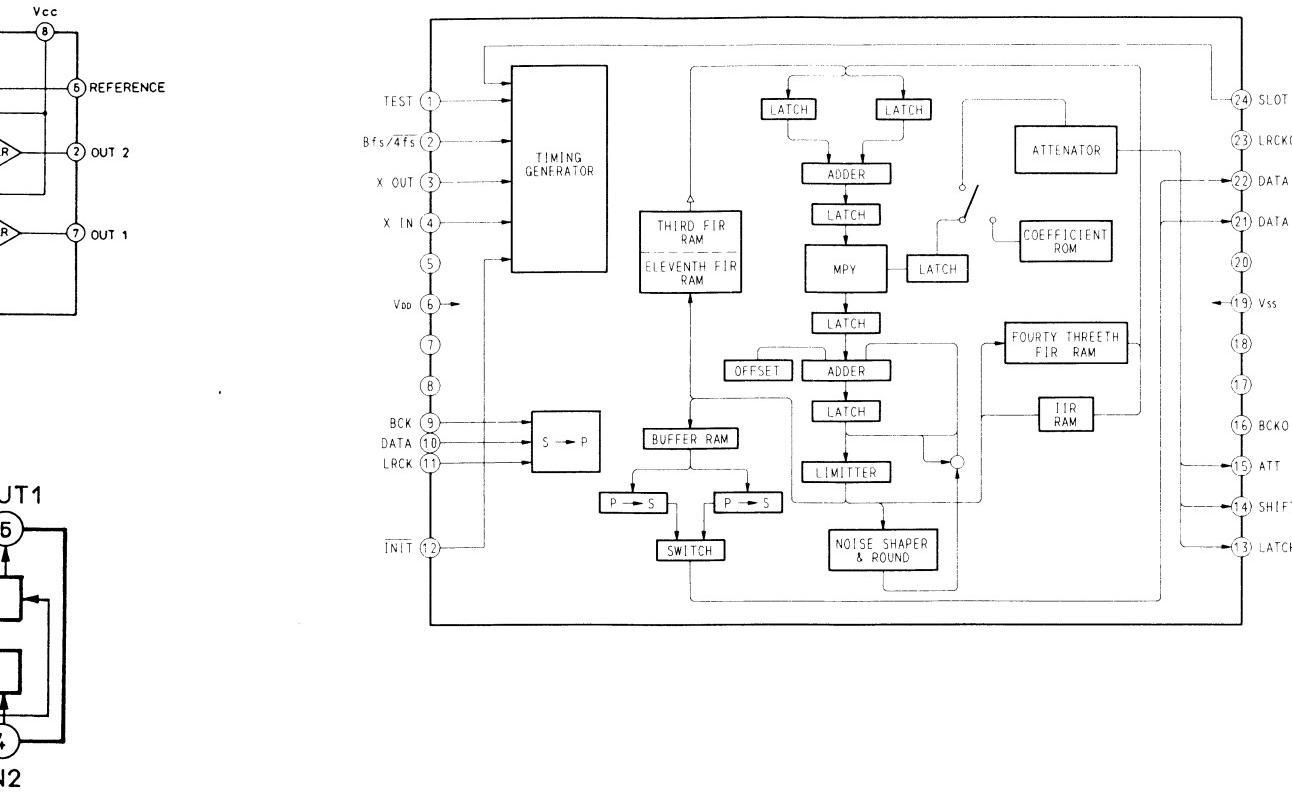
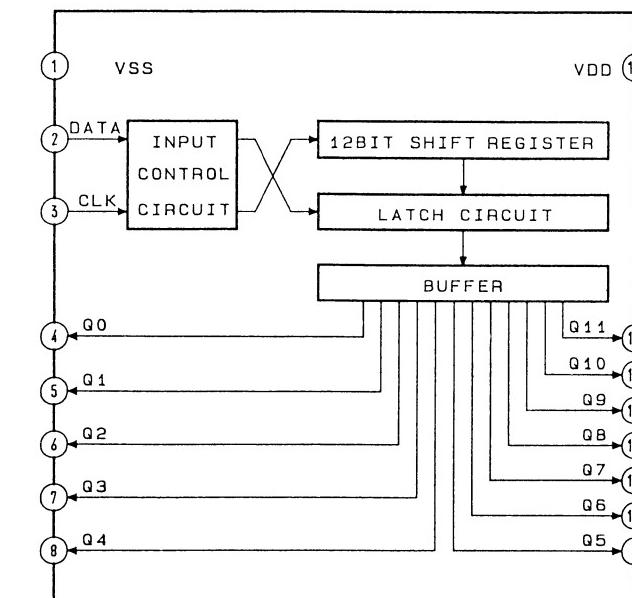
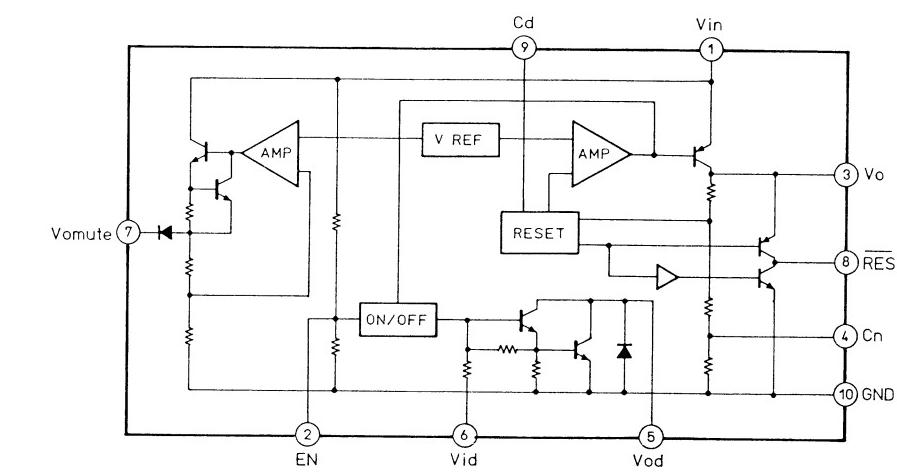
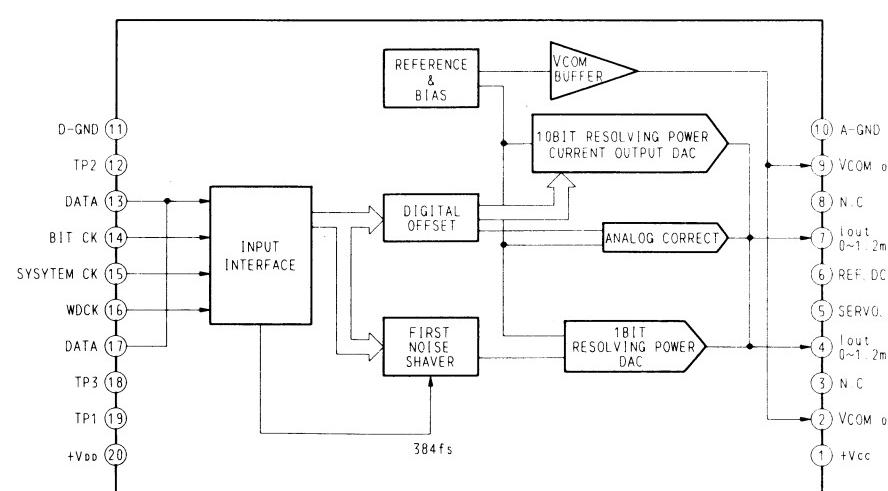
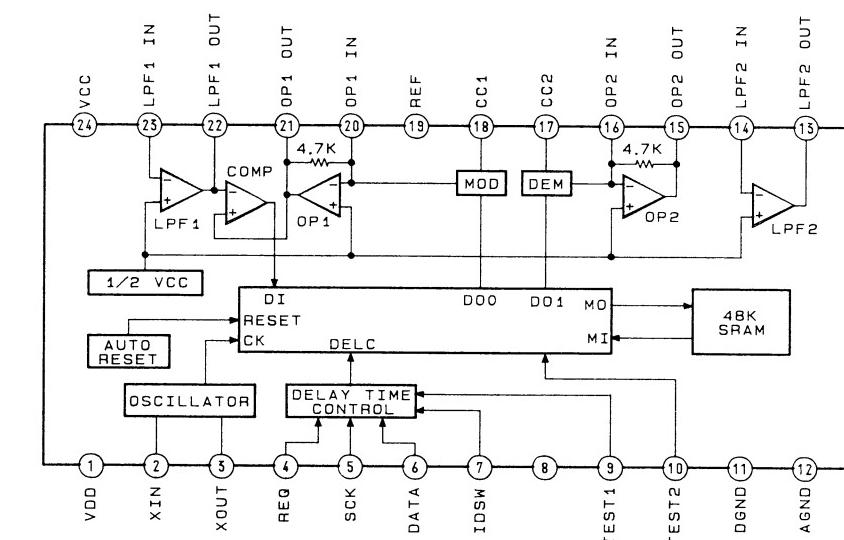
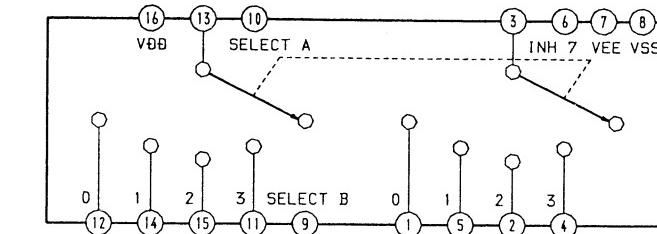


IC201 CXD2500BQ



IC203 MSI



IC203 MSM6538-01GS-VKR1**IC581 M50253PK****IC609 LA5601****IC301 PCM67U-B****IC601 M65831P****IC602 MC14052BCP**

6-5. PRINTED WIRING BOARDS –MAIN Section–

**See page 31, 32 for Circuit Boards Location
and Semiconductor Lead Layouts.**

- Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D1	I-9	IC802	I-19
D2	E-11	IC901	I-18
D581	D-11		
D582	D-11	Q1	H-10
D583	D-11	Q2	G-10
D584	F-5	Q3	G-9
D586	E-11	Q4	H-9
D587	F-4	Q5	G-9
D588	D-11	Q6	I-10
D589	J-11	Q7	J-10
D590	I-11	Q8	H-9
D601	H-3	Q9	I-9
D603	F-6	Q10	H-11
D604	I-4	Q11	G-11
D605	I-4	Q12	H-12
D801	H-20	Q13	G-12
D851	H-19	Q14	D-9
D901	J-16	Q15	D-9
D902	J-16	Q581	E-10
D903	I-16	Q582	E-11
D904	J-16	Q583	C-9
D905	I-15	Q601	H-2
D906	J-15	Q602	I-2
D907	J-19	Q603	I-2
D908	J-19	Q604	H-1
D909	I-18	Q751	G-4
D910	I-18	Q752	G-4
D911	I-15 ^{POWER} _{AMP}	Q801	H-20
D911	C-19 ^{POWER} _{SUPPLY}	Q802	H-19
D912	B-19	Q850	I-19
		Q901	J-18
IC1	F-11	Q902	I-18
IC2	F-9	Q903	G-16
IC581	D-11	Q904	G-16
IC601	I-7	Q905	J-19
IC602	G-7	Q906	J-19
IC603	G-5	Q907	J-19
IC604	I-5	Q908	J-20
IC605	H-5	Q909	J-18
IC606	H-2	Q910	G-16
IC607	G-3	Q911	G-16 ^{POWER} _{AMP}
IC609	I-8	Q911	B-18 ^{POWER} _{SUPPLY}
IC801	G-18		

Note:

- ○ : parts extracted from the component side.
 - — : parts extracted from the conductor side.
 - ■ : parts mounted on the conductor side.

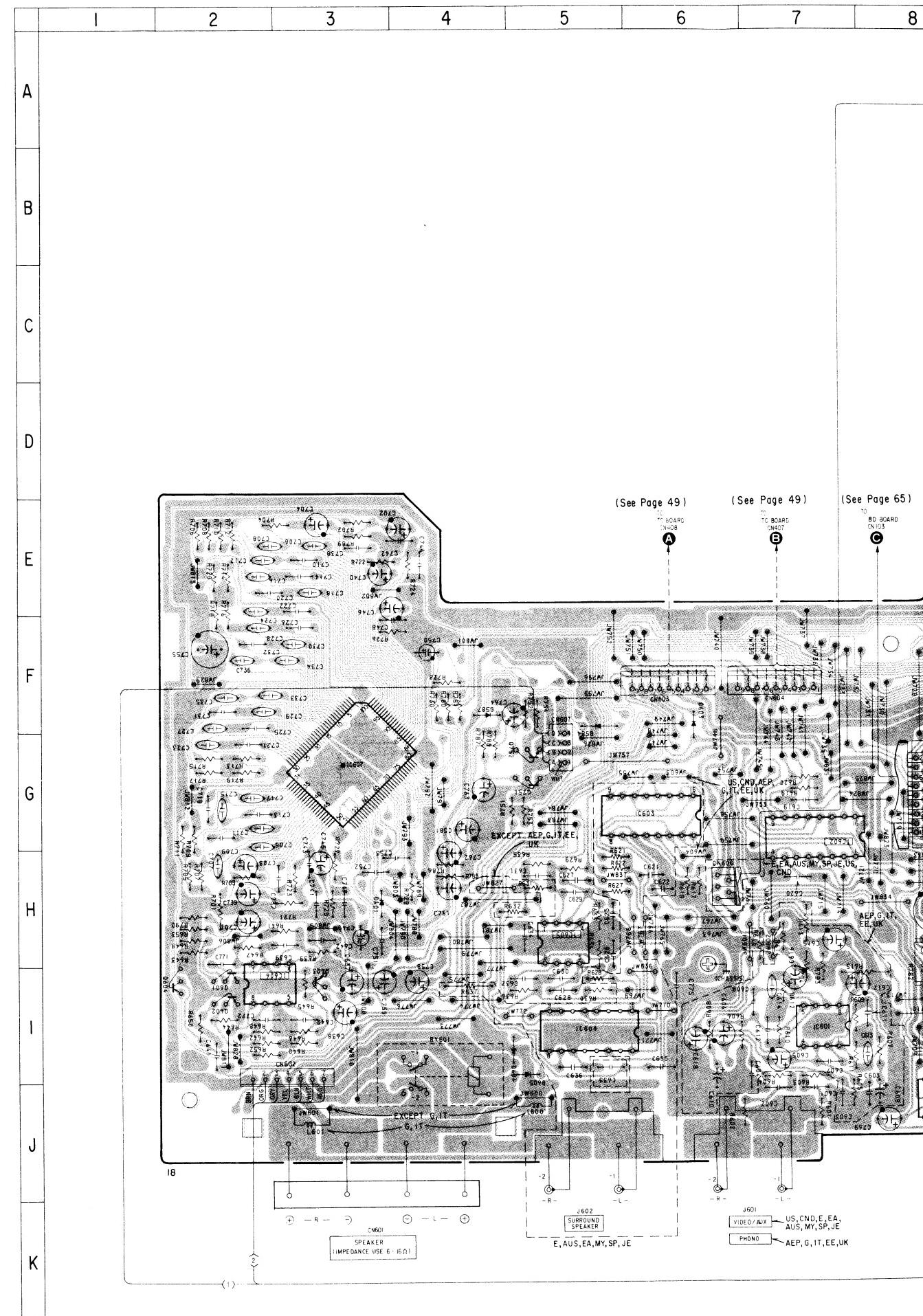
CND : Canadian EE : East European

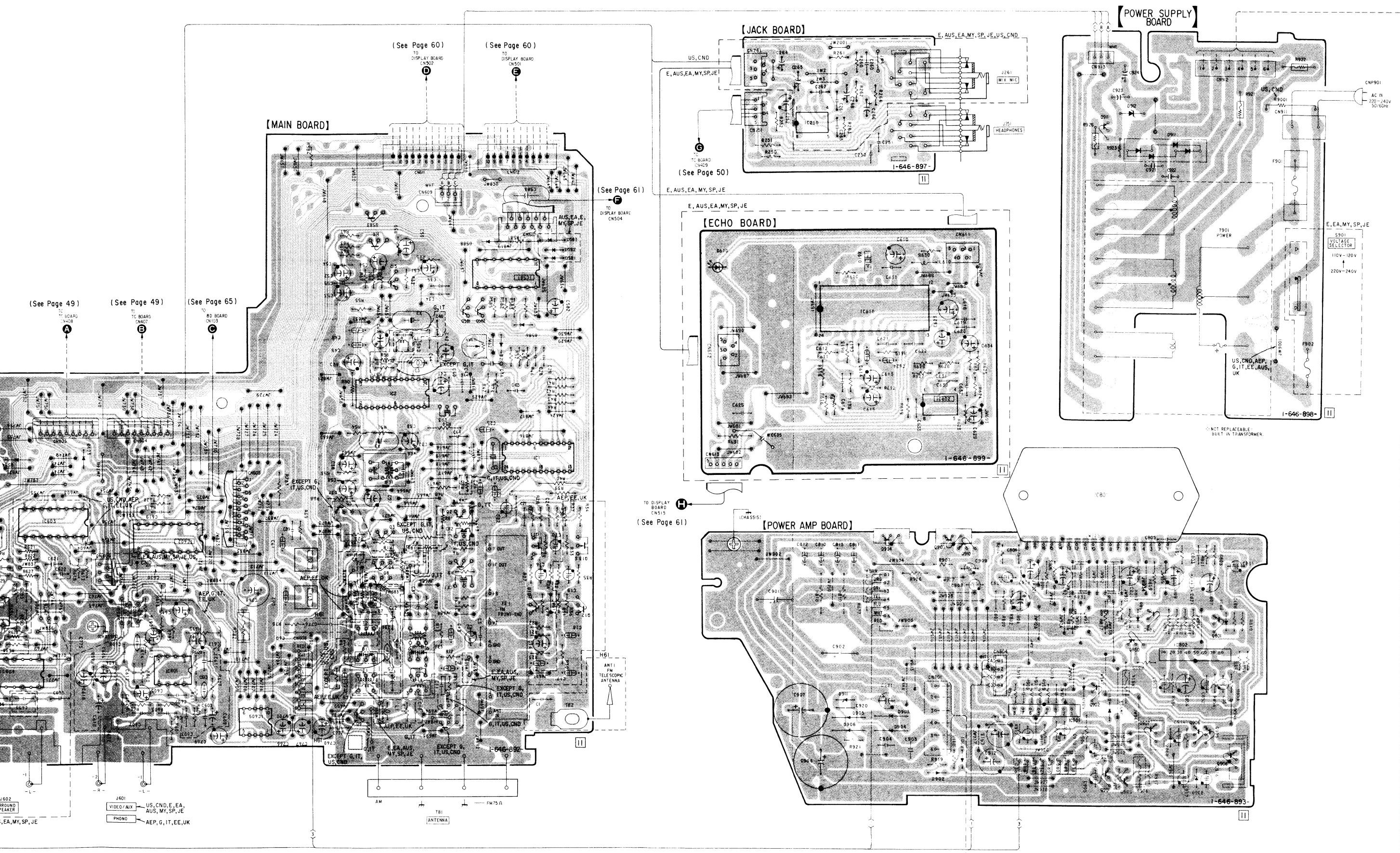
G : Germany MY : Malaysia

IT : Italian SP : Singapore

AUS : Australian IE : Tourist

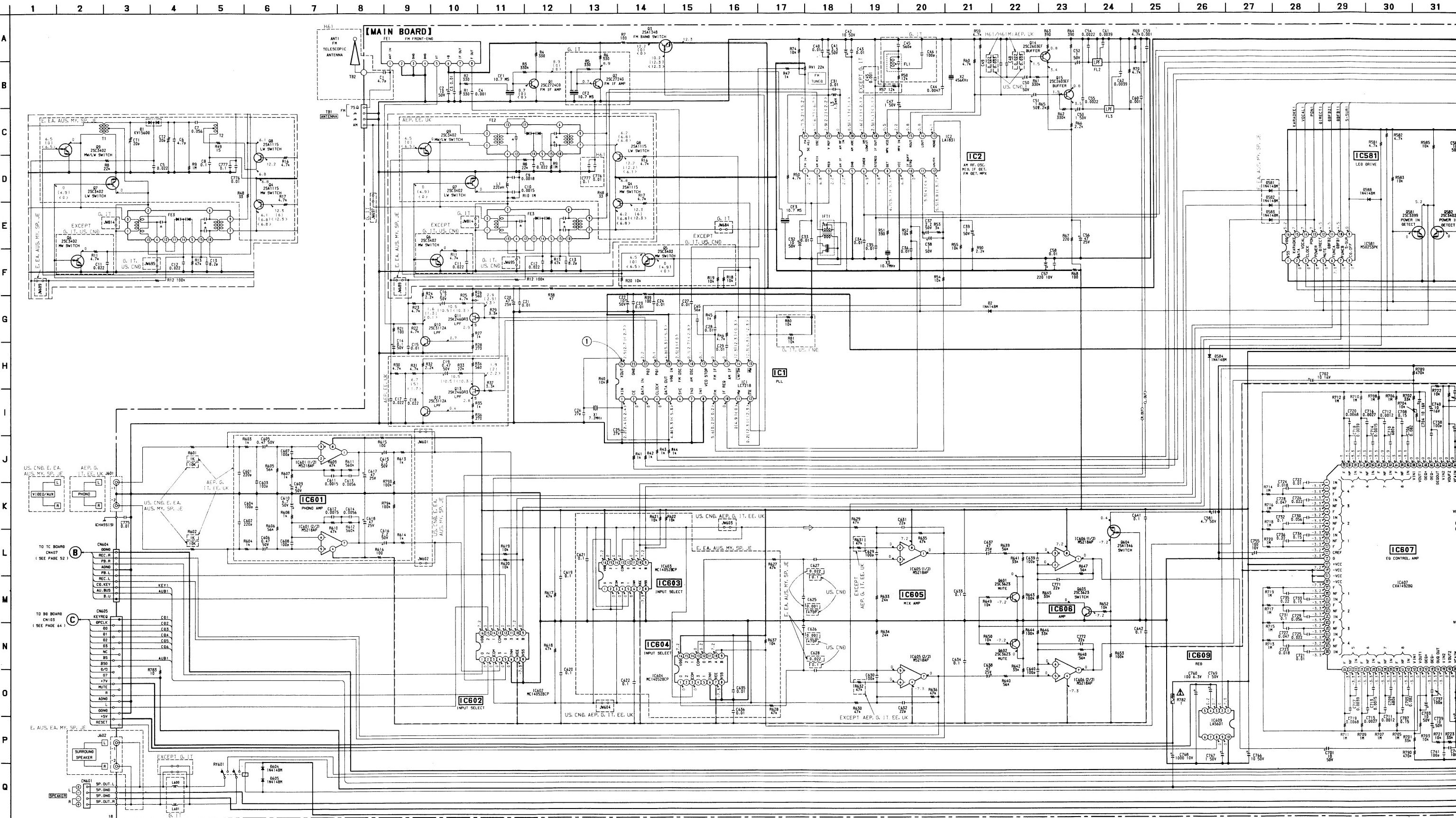
FA Committee

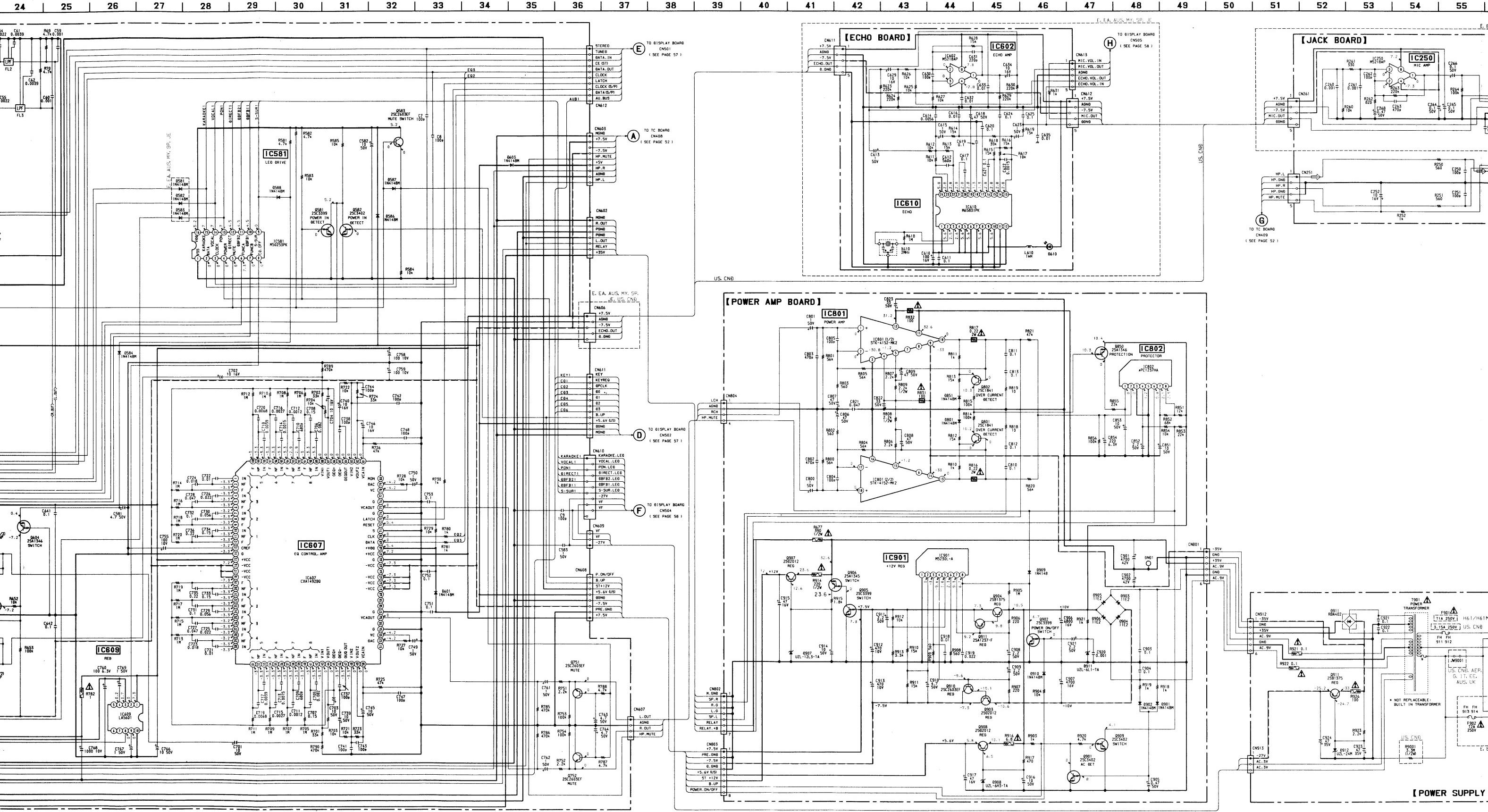


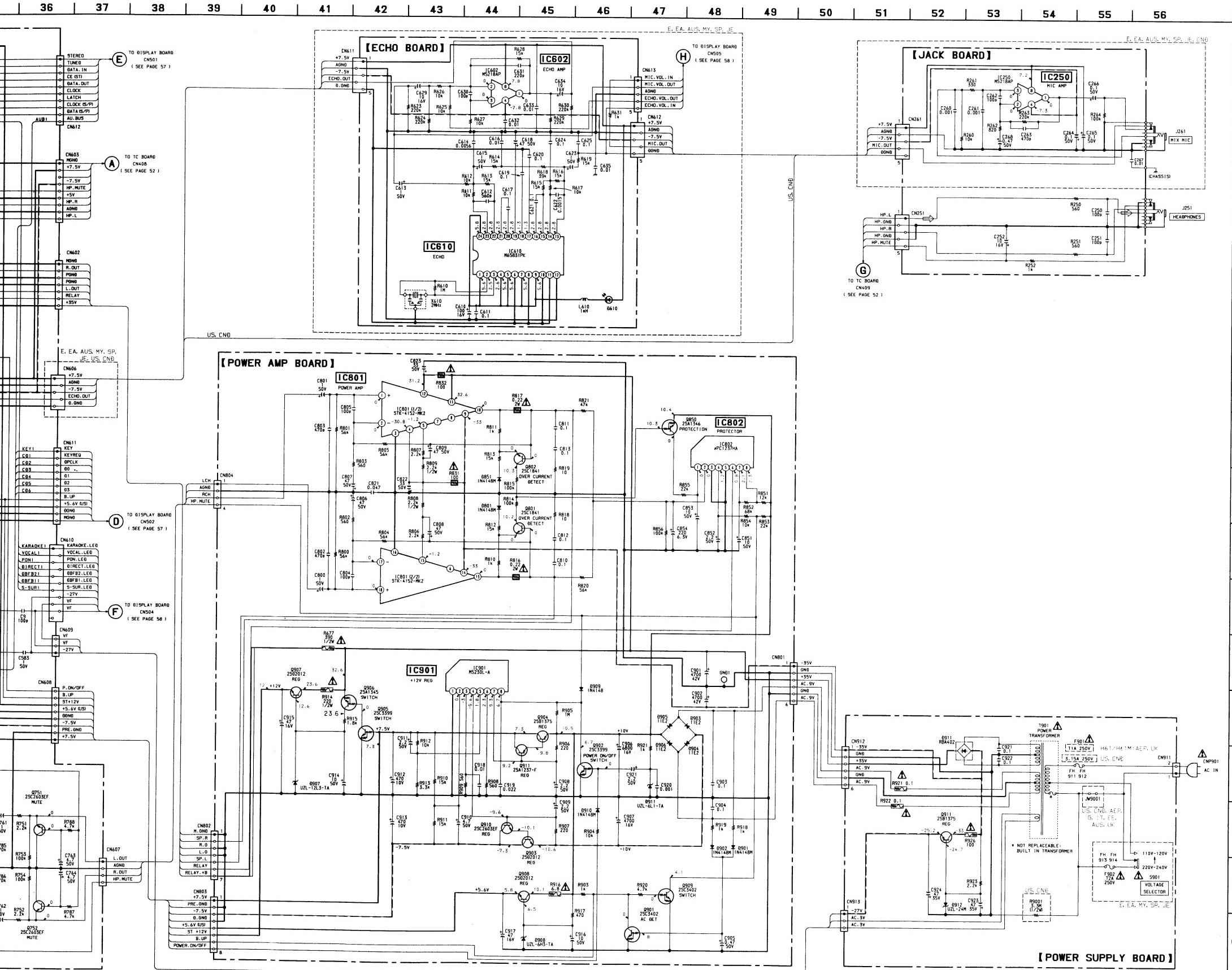


6-6. SCHEMATIC DIAGRAMS –MAIN Section–

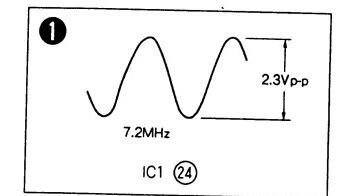
→ See page 33 for IC Block Diagrams.







- Waveform



Note:

- All capacitors are in μF unless otherwise noted. pF : $\mu\mu\text{F}$ 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
- \triangle : internal component.
- \square : nonflammable resistor.
- --- : fusible resistor.

Note:
The components identified by mark \triangle or dotted line with mark \triangle are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque \triangle sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

- --- : B+ Line
- --- : B- Line
- \square : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- no mark : FM
(): MW
< : AC/LW
- Voltages are taken with a VOM (Input Impedance $10\text{M}\Omega$). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.

\Rightarrow : PB (DECK A)
 \Rightarrow : REC (DECK B)
 \Rightarrow : CD

CND : Canadian EE : East European

G : Germany MY : Malaysia

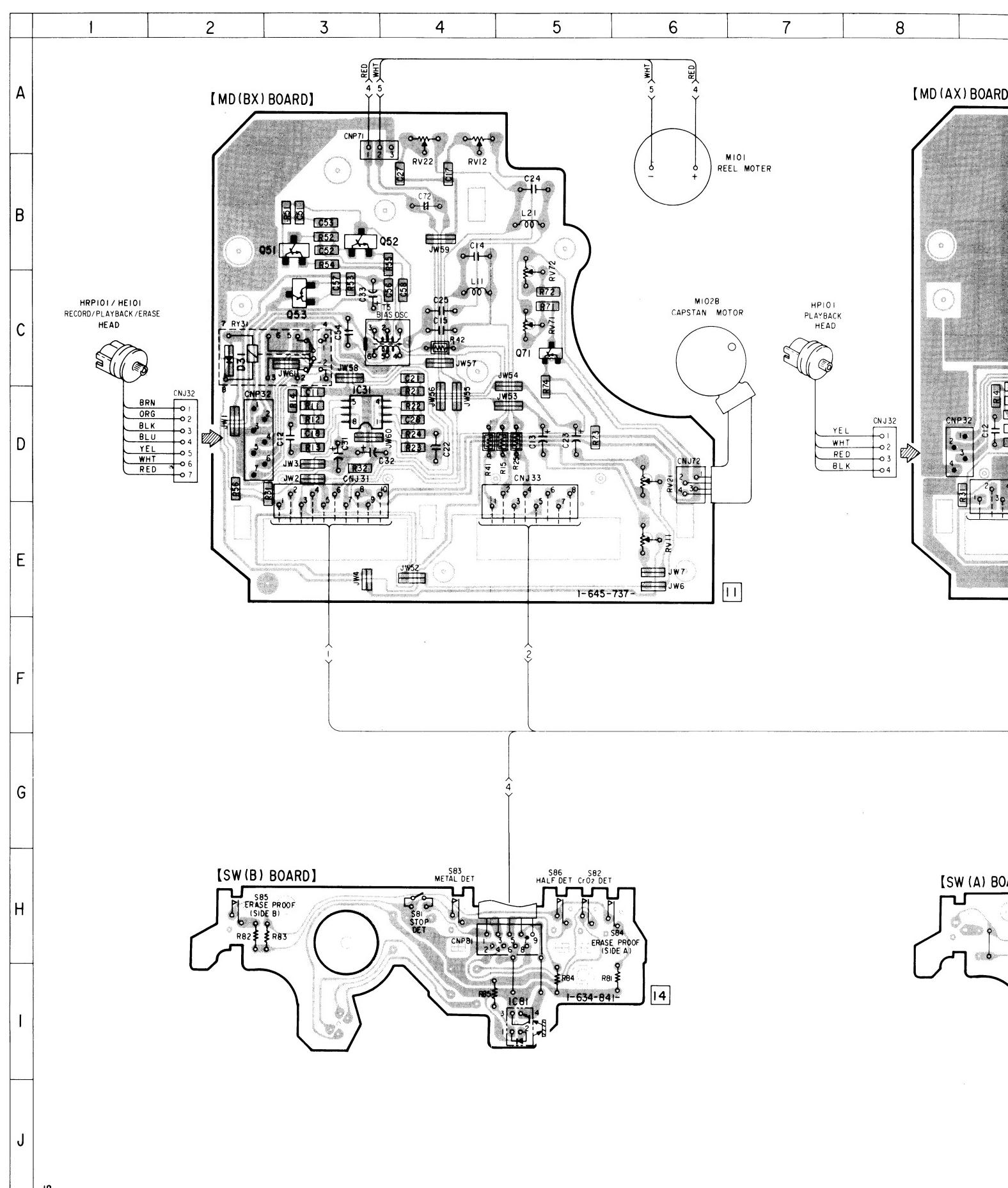
IT : Italian SP : Singapore

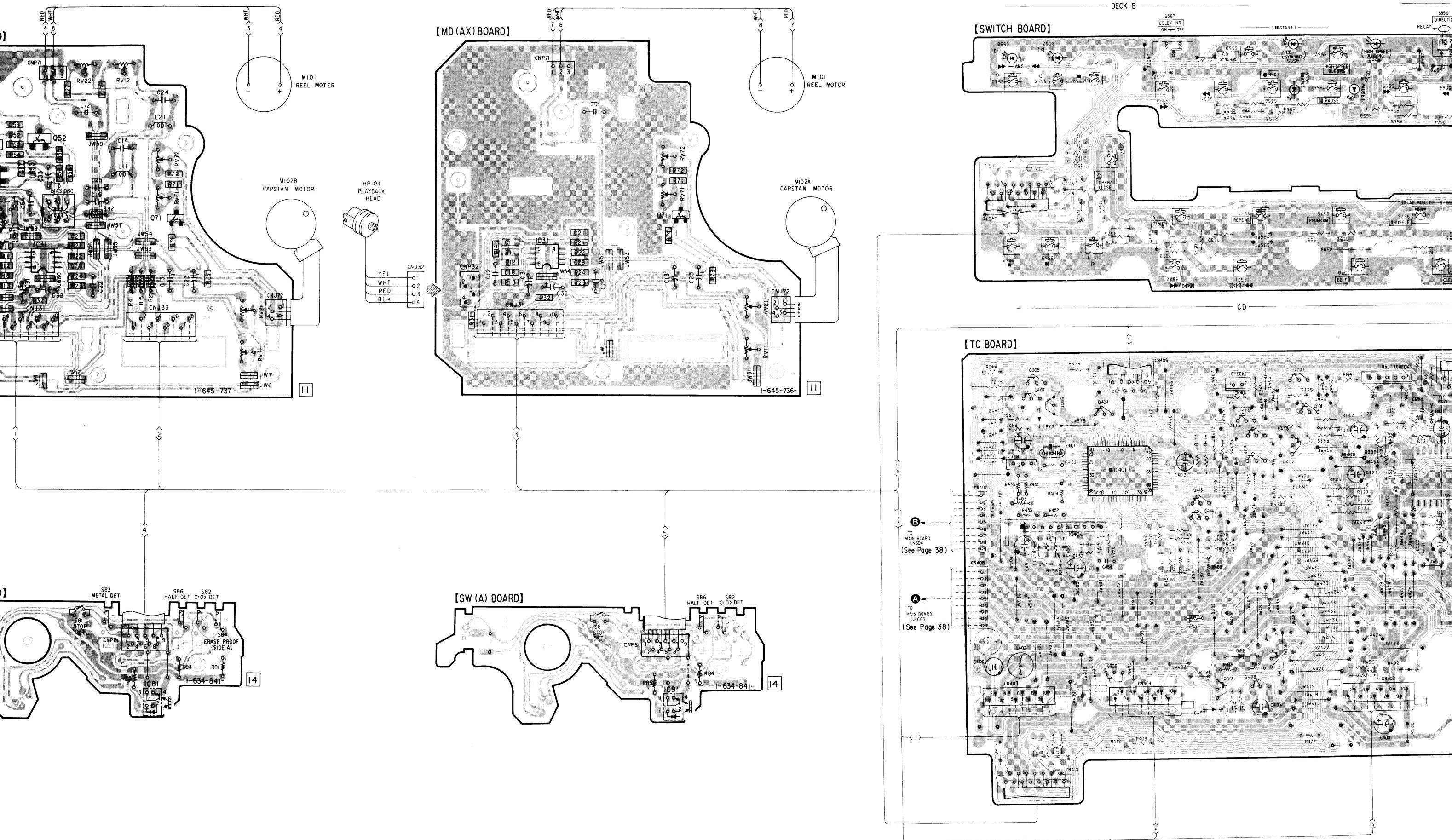
AUS : Australian JE : Tourist

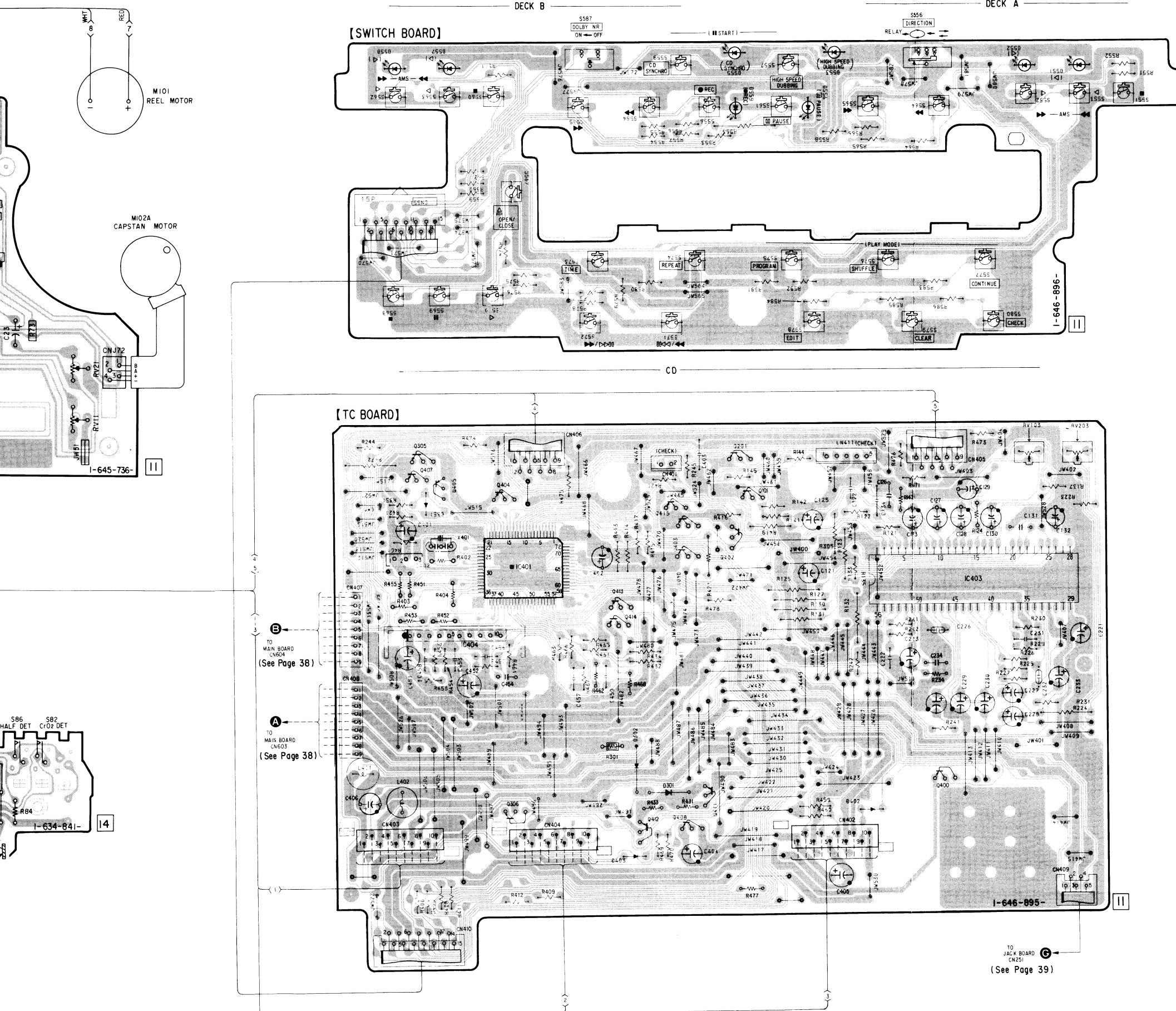
EA : Saudi Arabia

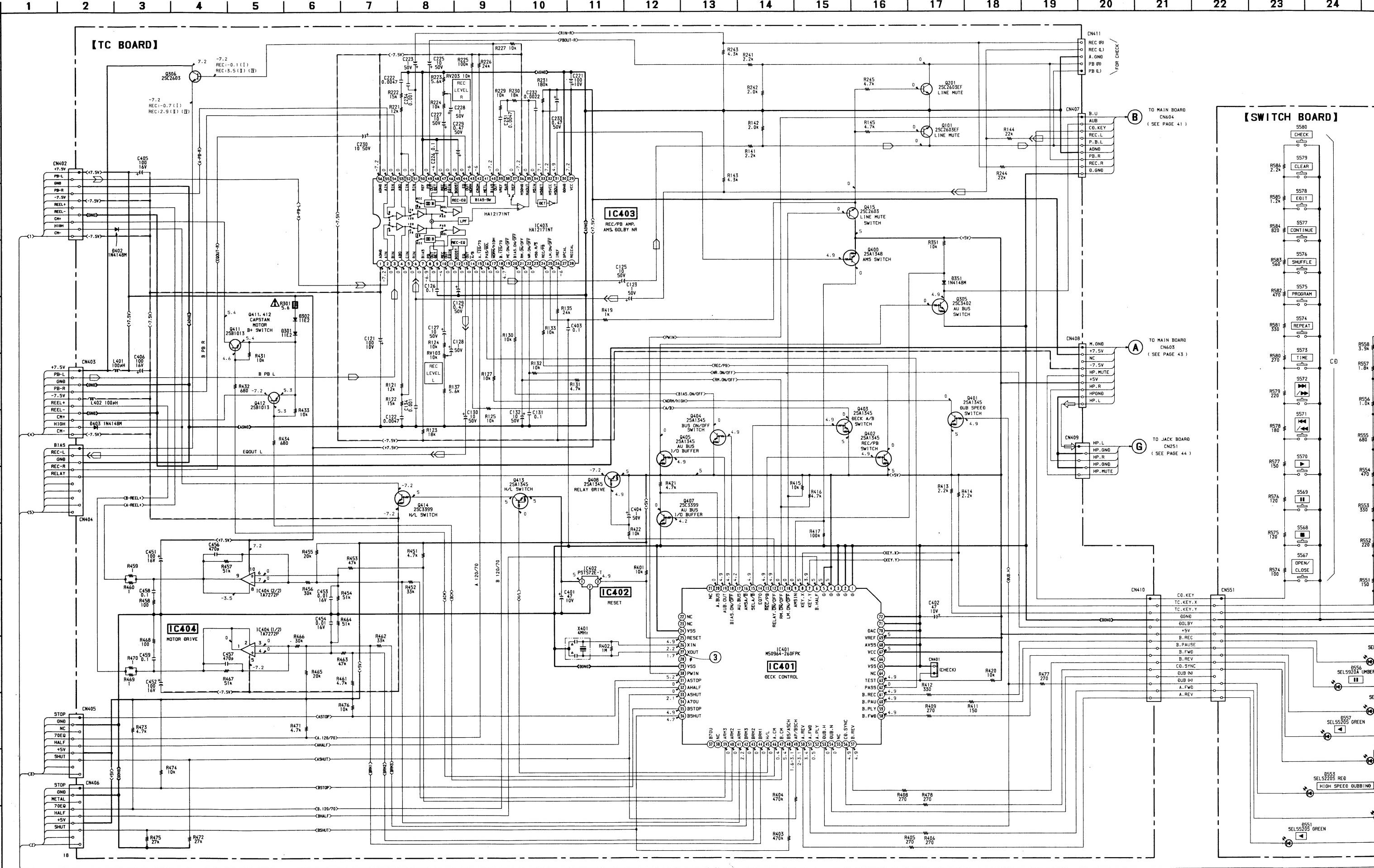
• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D31	C-2	Q51	B-3
D301	H-18	Q52	B-3
D302	H-18	Q53	C-3
D351	F-15	Q71	C-5 MD(BX)
D402	I-20	Q71	C-11 MD(AX)
D403	I-18	Q101	F-19
D551	A-22	Q201	E-19
D552	A-22	Q305	E-15
D553	A-20	Q306	I-16
D555	A-19	Q400	H-21
D556	B-20	Q401	F-18
D557	A-16	Q402	F-19
D558	A-15	Q403	I-18
D559	B-19	Q404	I-16
IC31	D-3 MD(BX)	Q405	E-16
IC31	D-9 MD(AX)	Q407	E-15
IC81	I-5 SW(B)	Q408	I-18
IC81	I-11 SW(A)	Q411	I-19
IC401	F-16	Q412	I-18
IC402	F-15	Q413	G-18
IC403	F-21	Q414	G-18
IC404	G-16	Q415	F-18

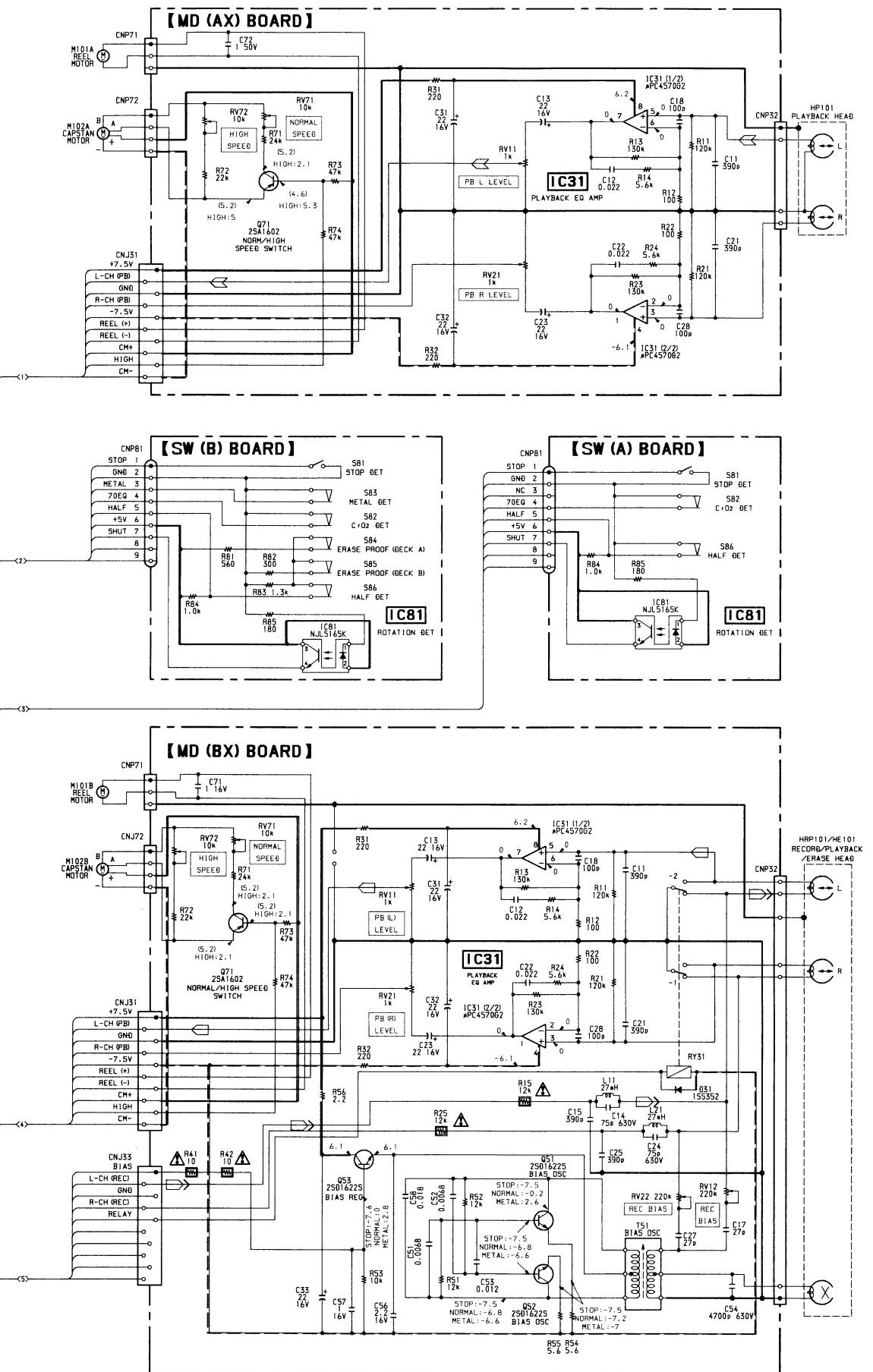
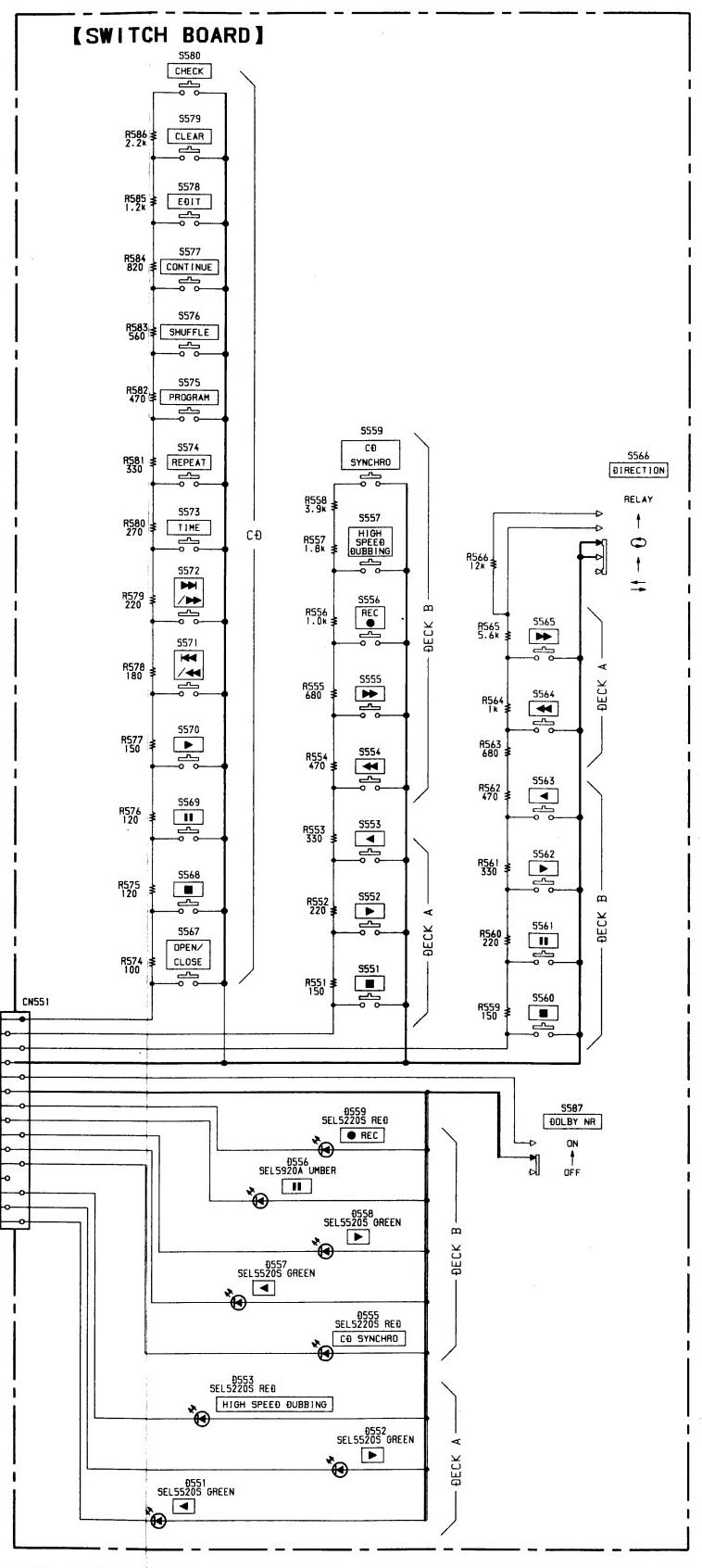






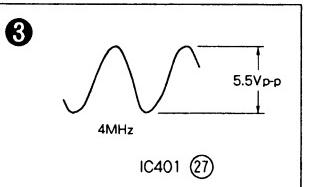


21 | **22** | **23** | **24** | **25** | **26** | **27** | **28** | **29** | **30** | **31** | **32** | **33** | **34** | **35** | **36** | **37**



A
B
C
D
E
F
G
H
I
J
K
L
M
N
O

• Waveform



Note:

- All capacitors are in μF unless otherwise noted. pF: μF
50WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
 -  : internal component.
 -  : nonflammable resistor.
 -  : fusible resistor.

Note:
Les composants identifiés par une marque sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

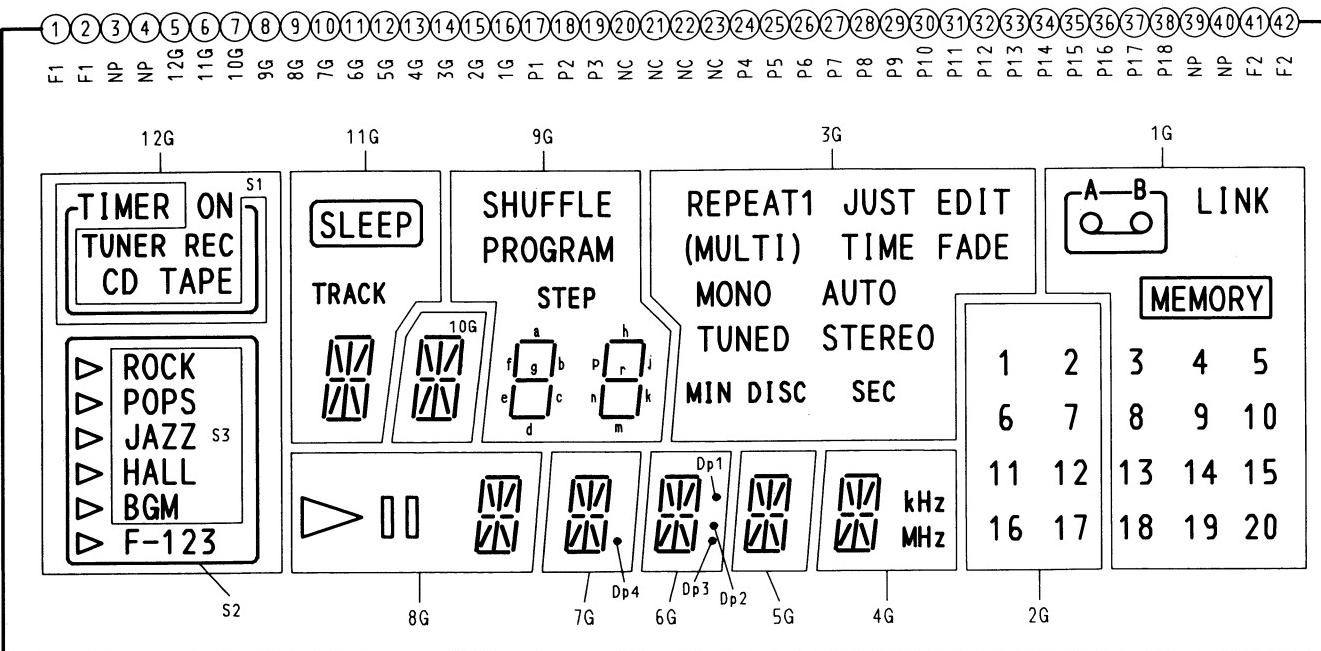
Note:
Les composants identifiés par une marque sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

- : B+ Line
 - : B- Line
 - : adjustment for repair.
 - Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
 - no mark : PLAY
 - () : REC
 - Voltages are taken with a VOM (Input Impedance $10M\Omega$). Voltage variations may be noted due to normal production tolerances.
 - Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
 - Circle numbers refer to waveforms.
 - Signal path.
 - ▷ : PB (DECK A)
 - ▷ : PB (DECK B)
 - ▷ : FM

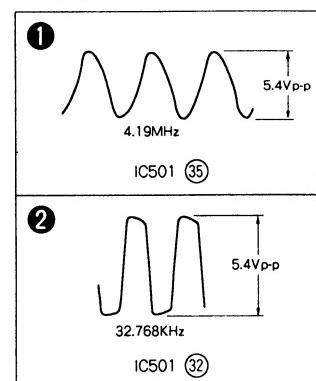
REC (DECK B)

—
—

FL501 LIQUID CRYSTAL DISPLAY PANEL (SEGMENT)



• Waveforms



FL501 LIQUID CRYSTAL DISPLAY PANEL (ANODE CONNECTION)

	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G	11G	12G
P1			REPEAT	a	a	a	a	a	a	a	a	S1
P2	MEMORY		JUST	b	b	b	b	b	b	b	b	CD
P3	20		MONO	c	c	c	c	c	c	c	c	▷ (POPS)
P4	14	12	STEREO	d	d	d	d	d	d	d	d	▷ (F-123)
P5	4	2	TIME	e	e	e	e	e	e	e	e	▷ (JAZZ)
P6	5		EDIT	f	f	f	f	f	f	f	f	TAPE
P7	10		DSC	g	g	g	g	g	g	g	g	S2
P8	B		(MULTI)	h	h	h	h	h	h	h	h	TUNER
P9	A		MIN	j	j	j	j	j	j	j	j	ON
P10	LINK		1	k	k	k	k	k	k	k	k	REC
P11	15		TUNED	m	m	m	m	m	m	m	m	▷ (ROCK)
P12	9	7	AUTO	n	n	n	n	n	n	n	n	S3
P13	8	6	SEC	p	p	p	p	p	p	p	p	▷ (BGM)
P14	3	1	FADE	r	r	r	r	r	r	r	r	▷ (HALL)
P15	18	16		kHz		Dp1	Dp4	▷	SHUFFLE		SLEEP	2
P16	19	17		MHz		Dp2		▷	PROGRAM		TRACK	1
P17	13	11				Dp3			STEP			F-
P18												3

Note:

- All capacitors are in μF unless otherwise noted. pF: $\mu\mu\text{F}$ 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
- \triangle : internal component.
- : nonflammable resistor.

Note:
The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

Note:
Les composants identifiés par une marque sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

- : B+ Line
- : B- Line
- : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- no mark: FM
- Voltages are taken with a VOM (Input Impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.

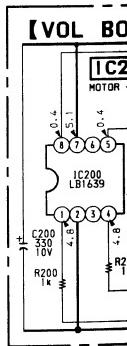
CND : Canadian EE : East European

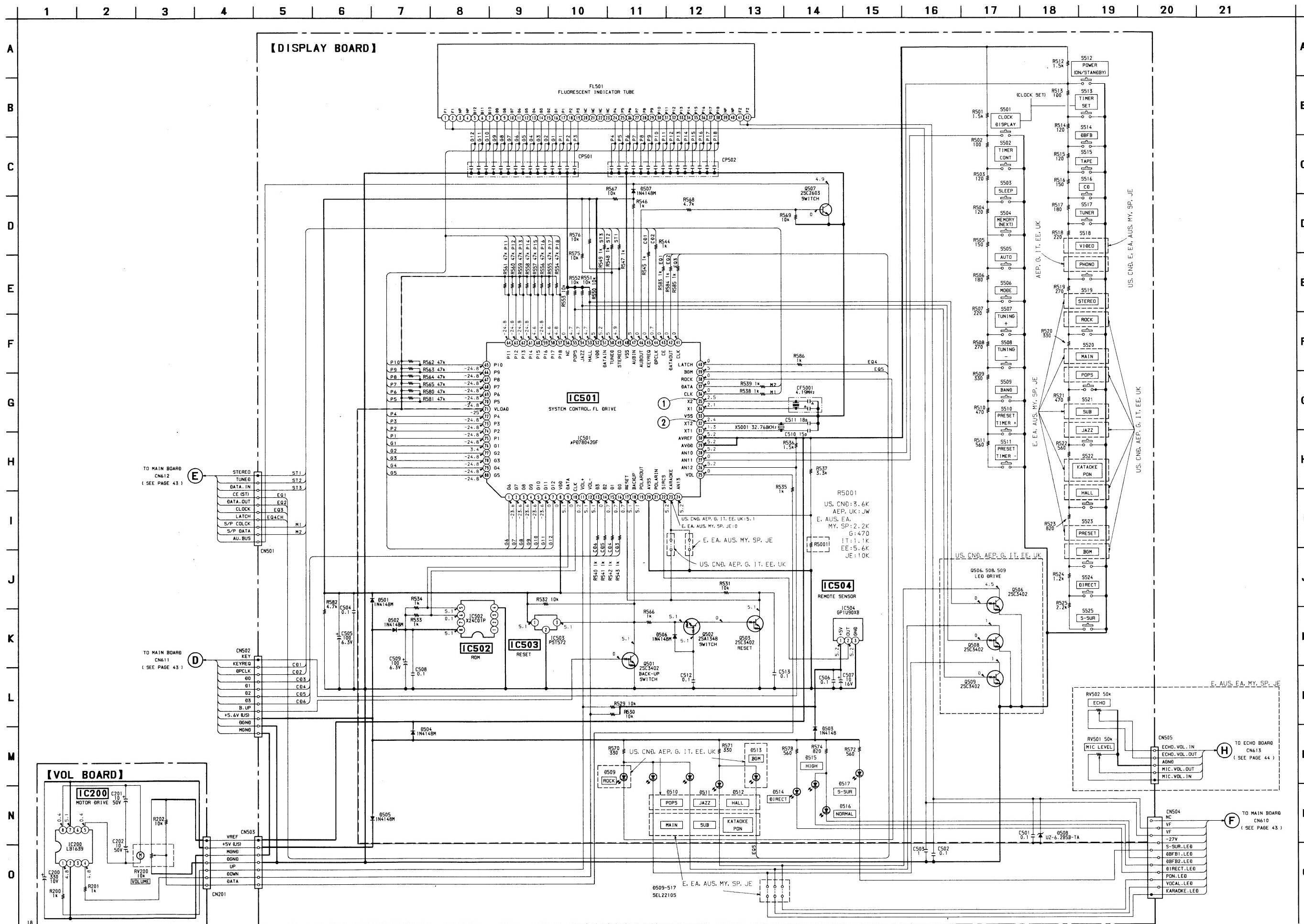
G : Germany MY : Malaysia

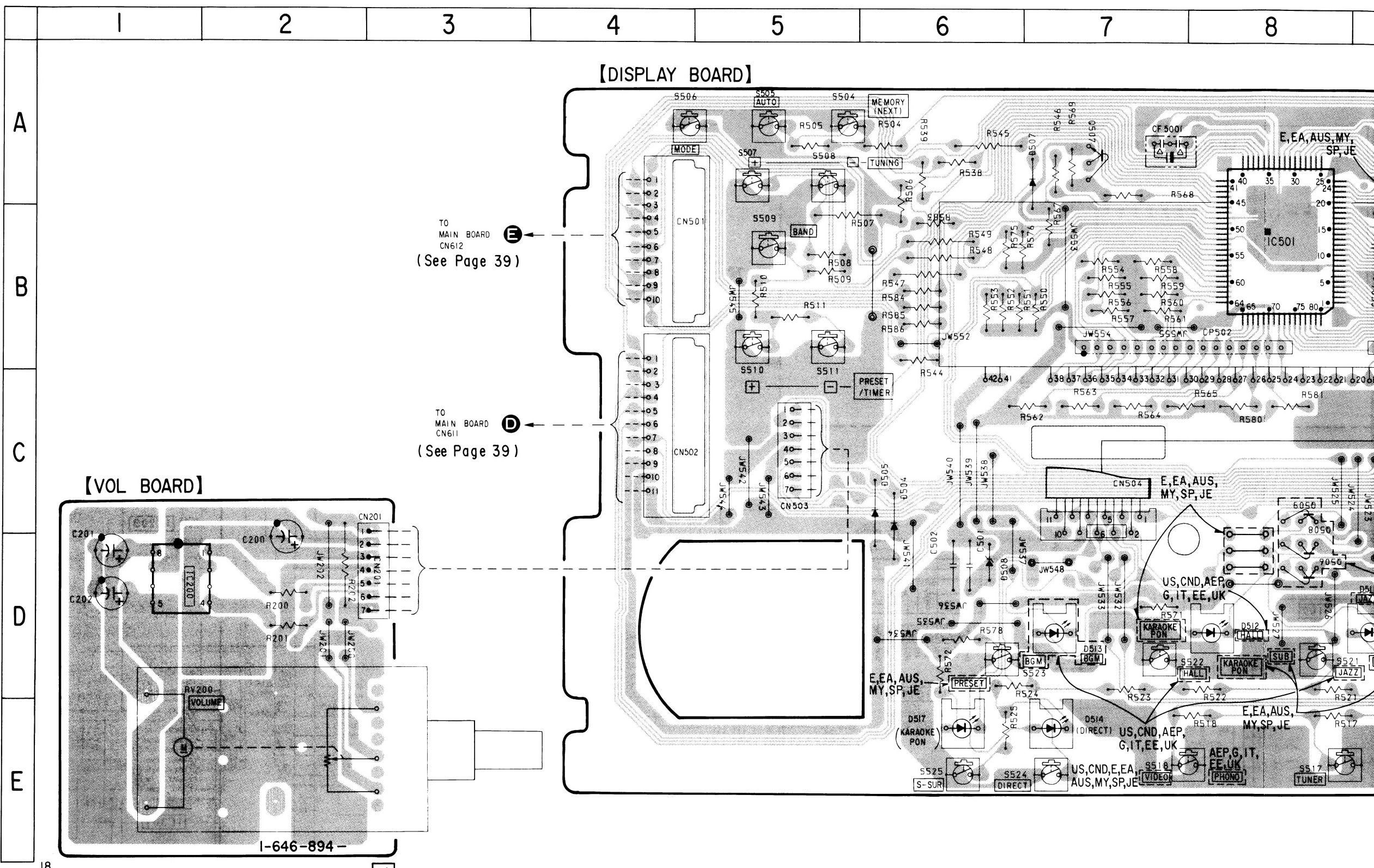
IT : Italian SP : Singapore

AUS : Australian JE : Tourist

EA : Saudi Arabia





**Note:**

- : parts extracted from the component side.
- : parts extracted from the conductor side.
- : parts mounted on the conductor side.

CND : Canadian EE : East European

G : Germany MY : Malaysia

IT : Italian SP : Singapore

AUS : Australian JE : Tourist

EA : Saudi Arabia

SPLAY Section— See page 31, 32 for Circuit Boards Location and Semiconductor Lead Layouts.

• See page 31, 32 for Circuit Boards Location and Semiconductor Lead Layouts

3

4

5

1

7

1

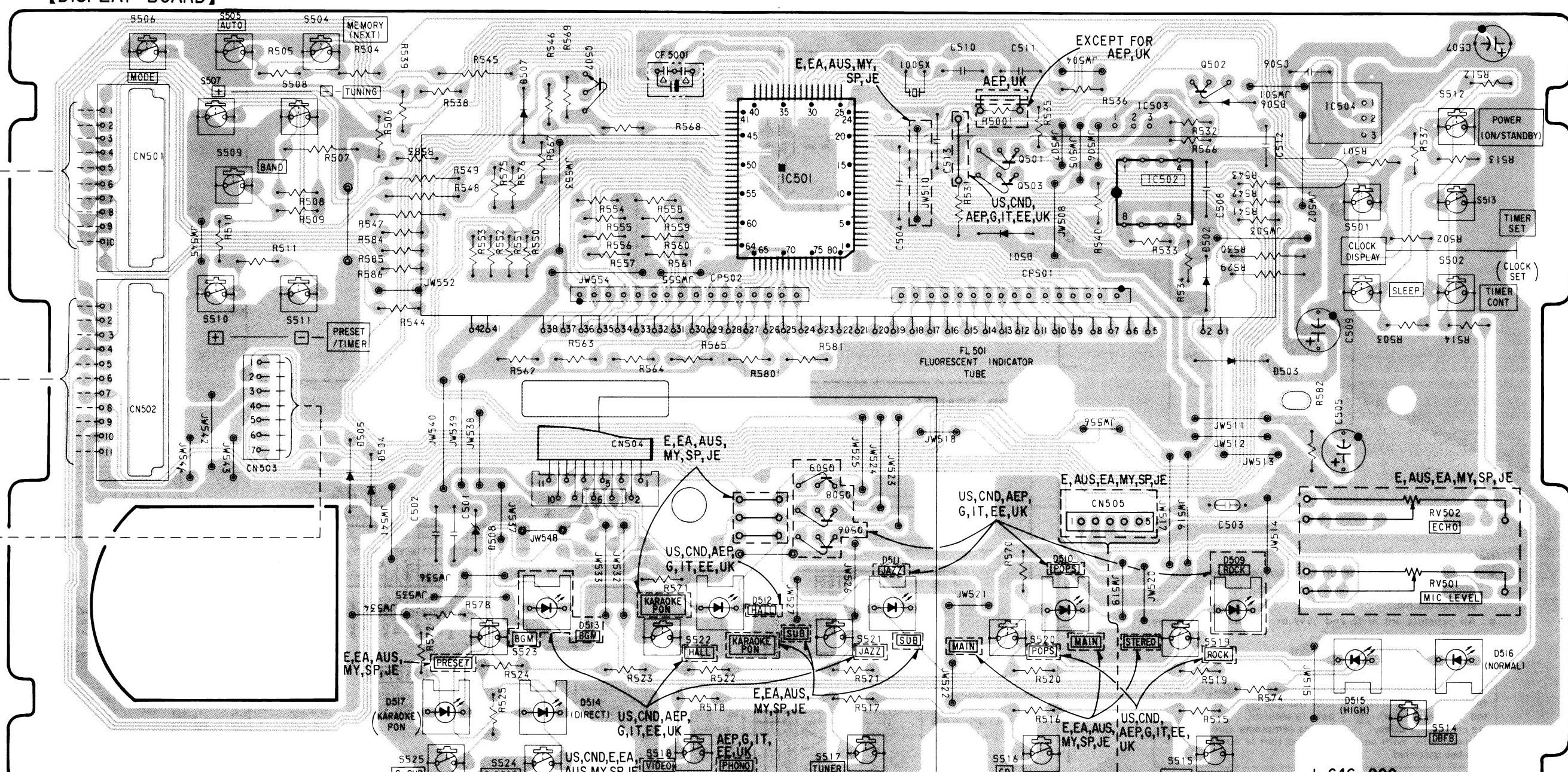
1

1

1

12

【DISPLAY BOARD】



TO
MAIN BOAR
CN610

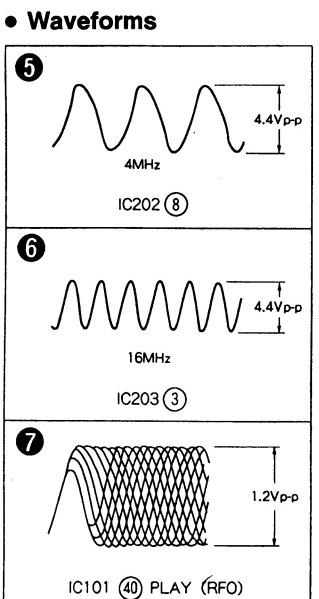
(See Page 39)

TO
ECHO BOARD
CN613

TO
ECHO BOARD
CN613

6-11. SCHEMATIC DIAGRAMS —CD Section—

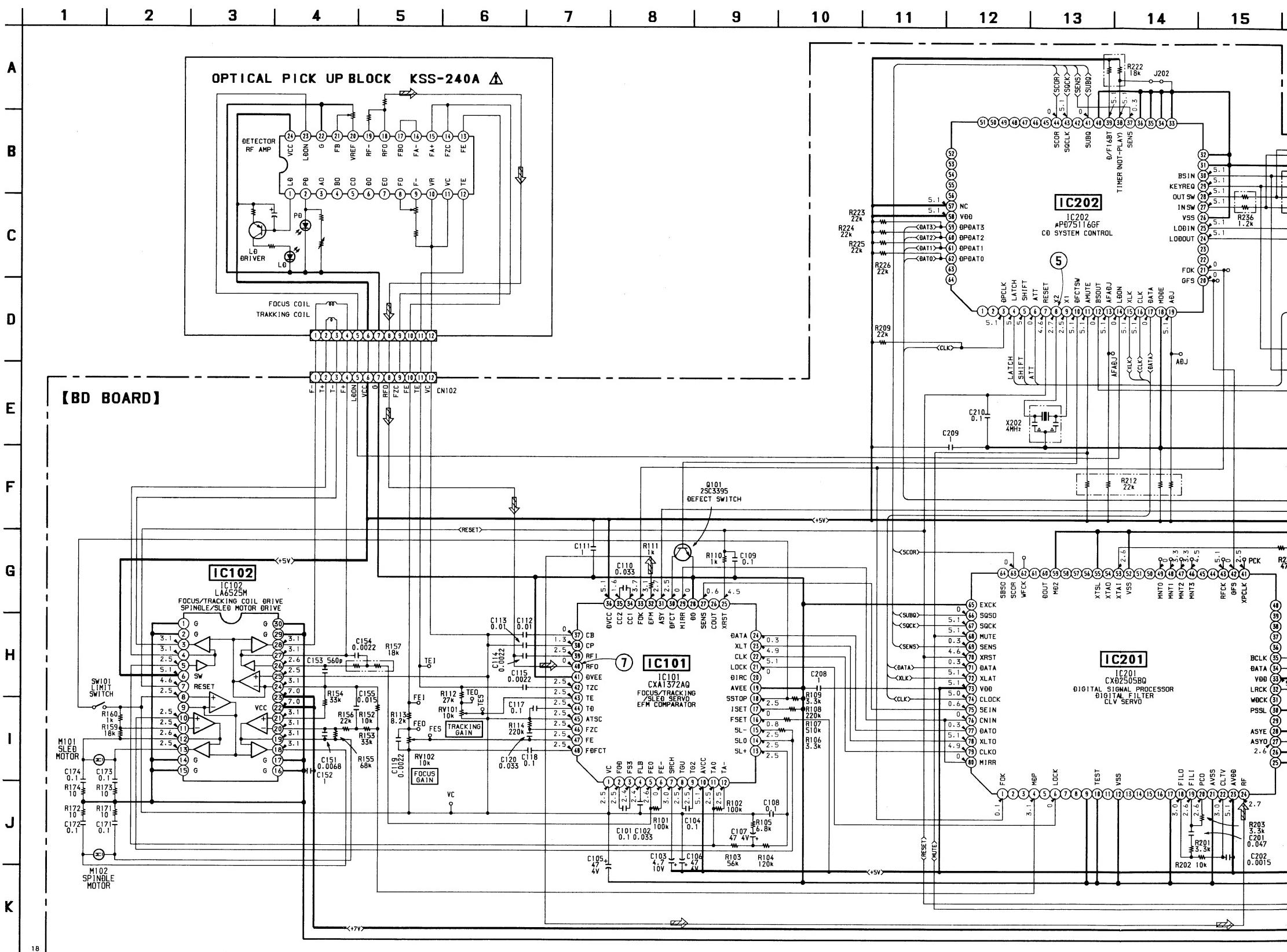
• See page 33 for IC Block Diagrams.



- Note:**
- All capacitors are in μF unless otherwise noted. pF: μF 50WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
 - \triangle : internal component.

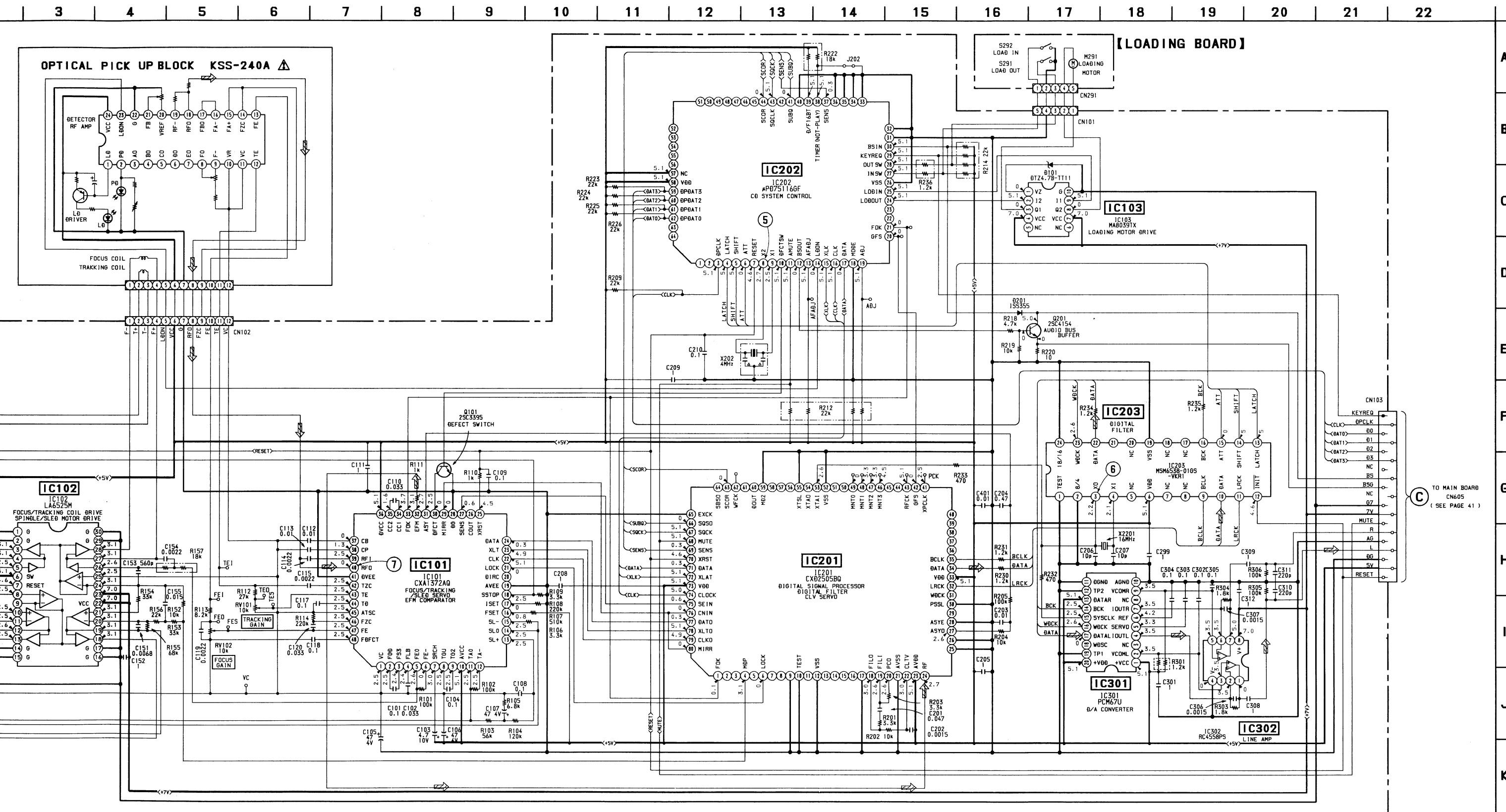
Note:
The components identified by mark \triangle or dotted line with mark \triangle are critical for safety.
Replace only with part number specified.

- --- : B+ Line
 --- : B- Line
 $\boxed{\text{---}}$: adjustment for repair.
Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
no mark: PLAY
Voltages are taken with a VOM (Input Impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
Waveforms are taken with a oscilloscope.
Voltage variations may be noted due to normal production tolerances.
Circled numbers refer to waveforms.
Signal path.
 \Rightarrow : CD



DIAGRAMS —CD Section—

• See page 33 for IC Block Diagrams.

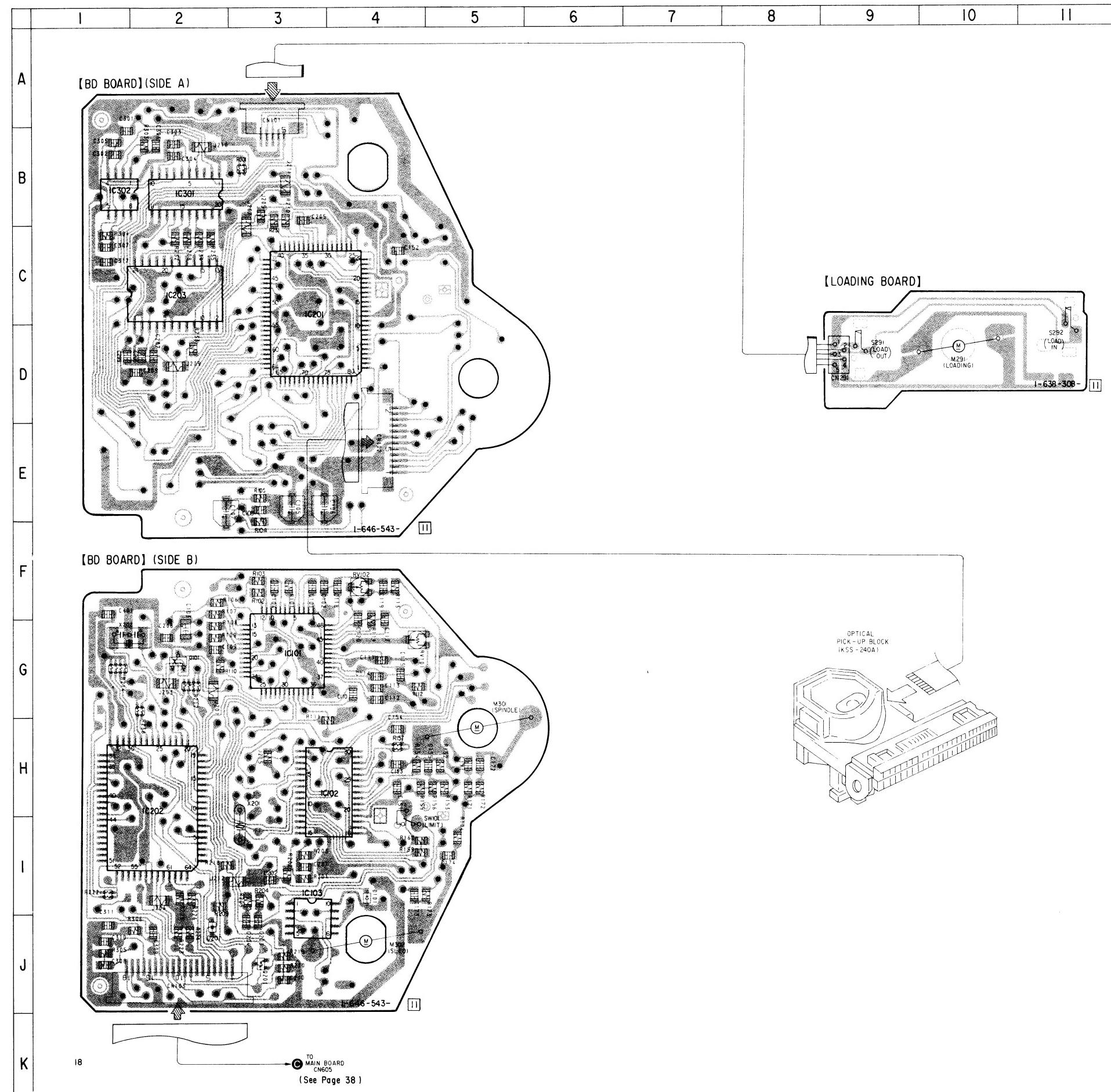


6-12. PRINTED WIRING BOARDS -CD Section-

• See page 31, 32 for Circuit Boards Location and Semiconductor Lead Layouts.

• Semiconductor Location

Ref. No.	Location
D101	I-4
D201	J-2
IC101	G-3
IC102	H-3
IC103	I-3
IC201	C-3
IC202	H-2
IC203	C-2
IC301	B-2
IC302	B-1
Q101	G-2
Q201	J-3



Note:

- : parts extracted from the component side.
- : parts extracted from the conductor side.

- : Through hole.

- : Pattern from the side which enables seeing.

(The other layers patterns are not indicated.)

SECTION 7 EXPLODED VIEWS

NOTE:

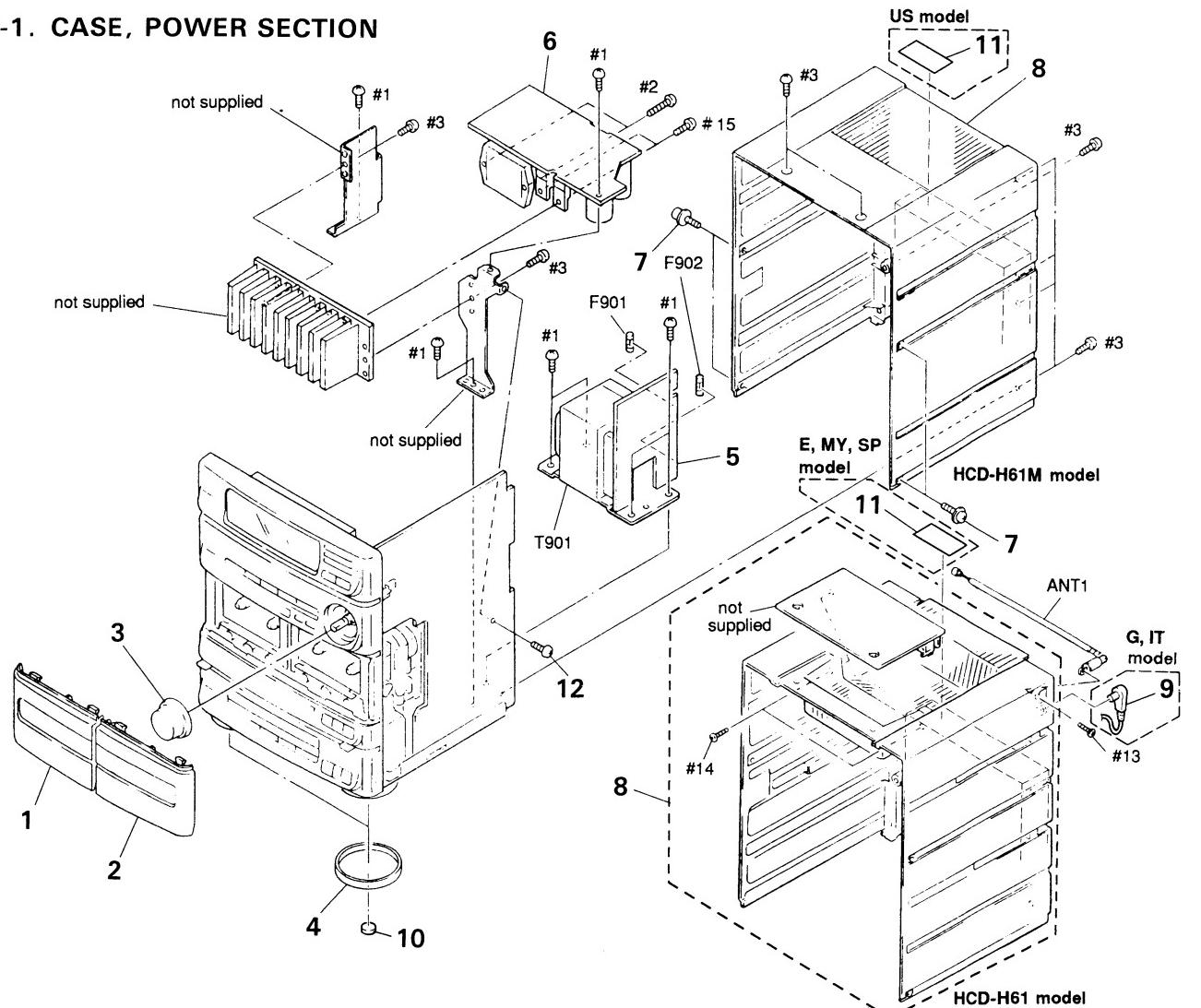
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts Example: KNOB, BALANCE (WHITE)... (RED)

Parts color Cabinet's color

● Abbreviations

CND: Canadian	AUS: Australian	MY: Malaysia
G: Germany	EA: Saudi Arabia	SP: Singapore
IT: Italian	EE: East European	JE: Tourist

7-1. CASE, POWER SECTION



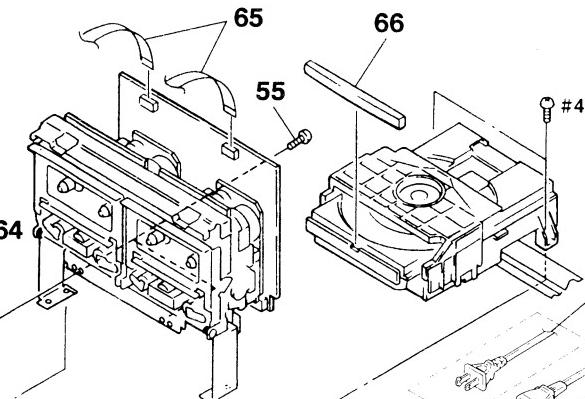
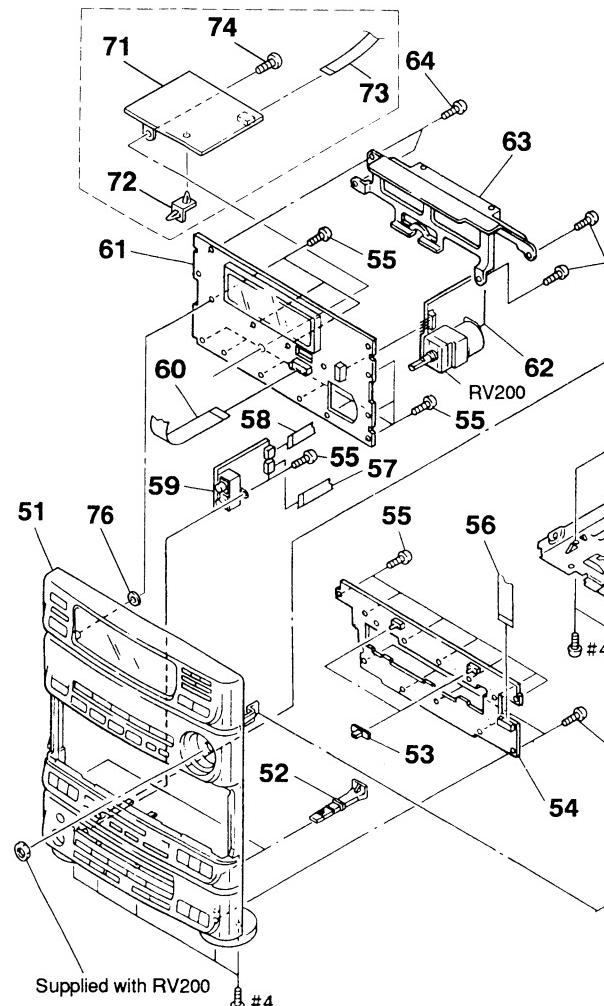
Ref. No.	Part No.	Description	Remark
1	X-4943-259-1	LID (A) ASSY, CASSETTE	
2	X-4943-260-1	LID (B) ASSY, CASSETTE	
3	4-956-480-01	KNOB (VOLUME)	
4	4-936-827-12	ORNAMENT (FOOT)	
* 5	1-646-898-11	POWER SUPPLY BOARD	
* 6	A-4356-568-A	POWER AMP BOARD, COMPLETE (EXCEPT E, IT, G)	
* 6	A-4356-574-A	POWER AMP BOARD, COMPLETE (G, IT)	
* 6	A-4356-577-A	POWER AMP BOARD, COMPLETE (E)	
7	3-704-366-01	SCREW (CASE) (M3X8)	
* 8	4-956-499-01	CASE (HCD-H61M)	
8	X-4943-266-1	CASE ASSY (E, EA, MY, SP, JE)	
8	X-4943-269-1	CASE ASSY (AUS)	
8	X-4943-270-1	CASE ASSY (HCD-H61:AEP, G, IT, EE)	

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

7-2. FRONT PANEL SECTION

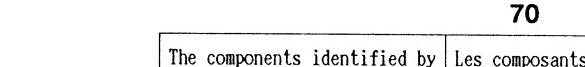
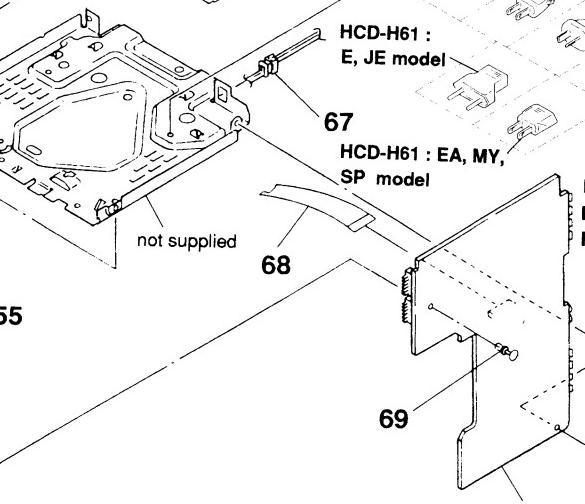
HCD-H61 : E, AUS, EA, MY, SP, JE model



HCD-H61M : US,
CND model

HCD-H61 : E, JE model

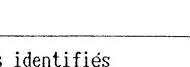
HCD-H61 : AUS model



HCD-H61 : UK model

HCD-H61 : AEP, G, IT,
EE, EA, MY, SP model

HCD-H61M : AEP model



The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

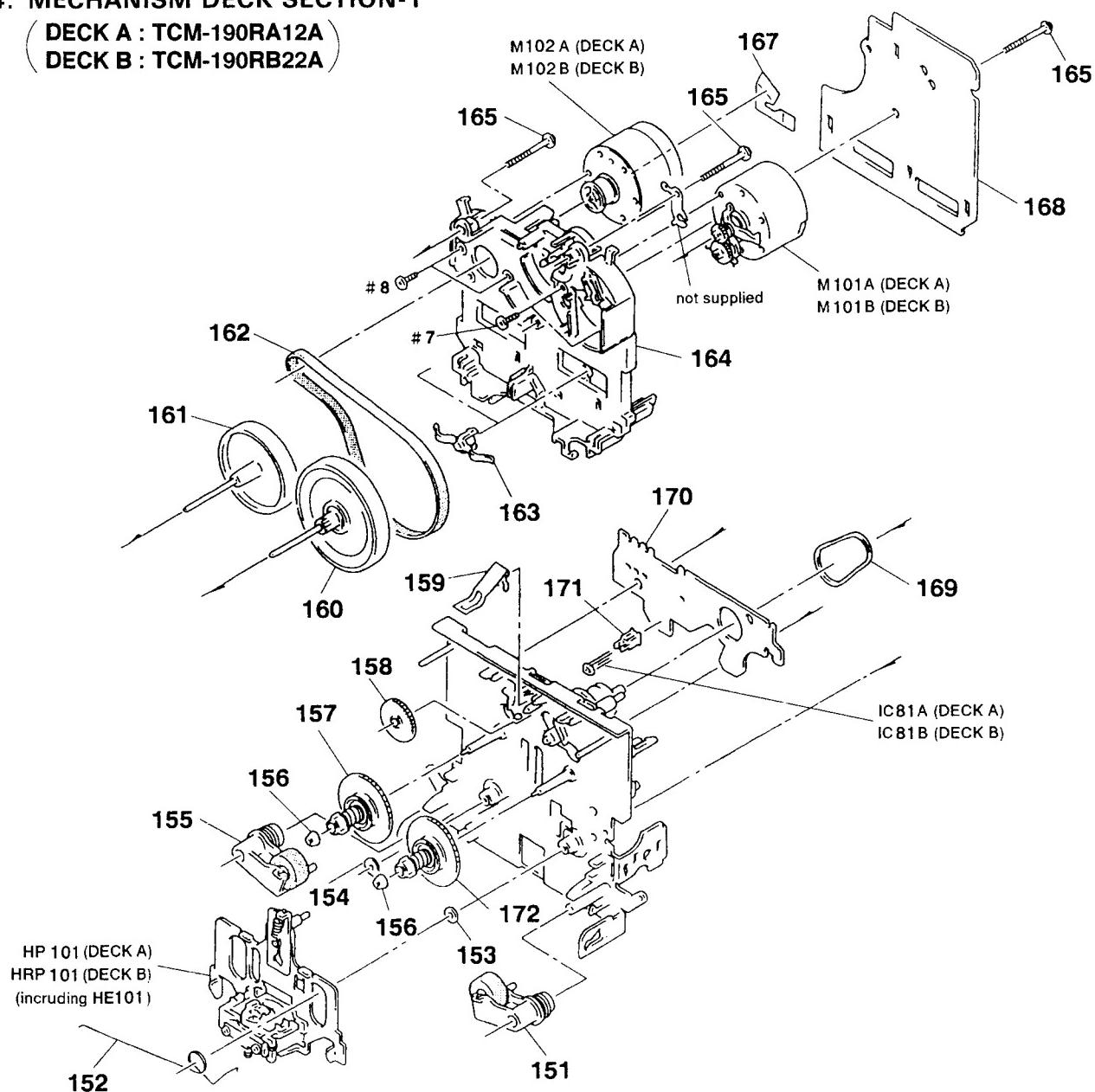
Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
51	X-4943-257-1	PANEL ASSY, FRONT (E, AUS, EA, MY, SP, JE)	
51	X-4943-258-1	PANEL ASSY, FRONT (HCD-H61:AEP, G, IT, EE)	
51	X-4943-267-1	PANEL ASSY, FRONT (HCD-H61M:AEP, UK)	
51	X-4943-271-2	PANEL ASSY, FRONT (US, CND)	
52	4-956-477-01	BUTTON (TC), EJECT	
53	4-956-476-01	KNOB (DIRECTION/DOLBY)	
* 54	A-4356-584-A	SWITCH BOARD, COMPLETE	
55	4-951-620-01	SCREW (2.6X8), +BVTP	
56	1-696-922-11	WIRE (FLAT TYPE) (15 CORE)	
57	1-696-923-11	WIRE (FLAT TYPE) (5 CORE)	
58	1-696-924-11	WIRE (FLAT TYPE) (5 CORE)	
* 59	1-646-897-11	JACK BOARD	(US, CND)
60	1-696-920-11	WIRE (FLAT TYPE) (11 CORE)	
* 61	A-4356-593-A	DISPLAY BOARD, COMPLETE	(UK)
* 61	A-4356-594-A	DISPLAY BOARD, COMPLETE	(US, CND)
* 61	A-4356-600-A	DISPLAY BOARD, COMPLETE	(AEP)
* 61	A-4356-601-A	DISPLAY BOARD, COMPLETE	(G)
* 61	A-4356-602-A	DISPLAY BOARD, COMPLETE	(IT)
* 61	A-4356-603-A	DISPLAY BOARD, COMPLETE	
62	1-576-107-11	FUSE (3.15A/250V)	(HCD-H61/HCD-H61M:AEP, UK)
* 62	1-532-203-00	FUSE (T2A/250V)	(US, CND)
* 62	1-423-447-11	TRANSFORMER, POWER	(E, EA, MY, SP, JE)
* 62	1-423-448-11	TRANSFORMER, POWER	(US, CND)
* 62	1-423-450-11	TRANSFORMER, POWER	(AEP, G, IT, EE)
* 63	1-646-894-11	VOL BOARD	
* 64	4-956-469-01	BRACKET (CASE)	
64	4-928-635-21	SCREW, +BV (2.6X10) TAPPING	
65	1-690-588-31	WIRE, FLAT TYPE (9 CORE)	
66	4-956-474-01	PANEL, LOADING	

Ref. No.	Part No.	Description	Remark
* 67	3-703-244-00	BUSHING (2104), CORD (EXCEPT E, JE)	
* 67	3-703-571-11	BUSHING (S) (4516), CORD (E, JE)	
68	1-696-921-11	WIRE (FLAT TYPE) (19 CORE)	
69	4-812-134-00	RIVET NYLON, 3.5	
* 70	A-4356-559-A	MAIN BOARD, COMPLETE	
* 70	A-4356-561-A	MAIN BOARD, COMPLETE (HCD-H61M:AEP, UK)	
* 70	A-4356-562-A	MAIN BOARD, COMPLETE (US, CND)	
* 70	A-4356-569-A	MAIN BOARD, COMPLETE (HCD-H61:AEP)	
* 70	A-4356-570-A	MAIN BOARD, COMPLETE (G, IT)	
* 70	A-4356-571-A	MAIN BOARD, COMPLETE (EE)	
* 70	A-4356-572-A	MAIN BOARD, COMPLETE (E, AUS, EA, MY, SP)	
* 70	A-4360-497-A	MAIN BOARD, COMPLETE (JE)	
* 71	A-4356-593-A	ECHO BOARD, COMPLETE	
* 72	4-922-413-01	HOLDER, PC BOARD (E, AUS, EA, MY, SP, JE)	
73	1-696-919-11	WIRE (FLAT TYPE) (5 CORE)	
74	4-951-620-01	SCREW (2.6X8), +BVTP (E, AUS, EA, MY, SP, JE)	
* 75	1-569-007-11	ADAPTER, CONVERSION 2P (E, JE)	
* 75	1-569-008-11	ADAPTER, CONVERSION 2P (EA, MY, SP)	
76	4-949-302-41	WASHER	
* 76	1-574-902-11	CORD, POWER (E, JE)	
* 76	1-575-975-11	CORD, POWER (US, CND)	
* 76	1-590-083-11	CORD, POWER (AUS)	
* 76	1-696-169-11	CORD, POWER (AEP, G, IT, EE, EA, MY, SP)	
* 76	1-696-570-21	CORD, POWER (UK)	
RV200	1-223-301-11	RES, VAR, CARBON (WITH MOTOR) (VOLUME)	

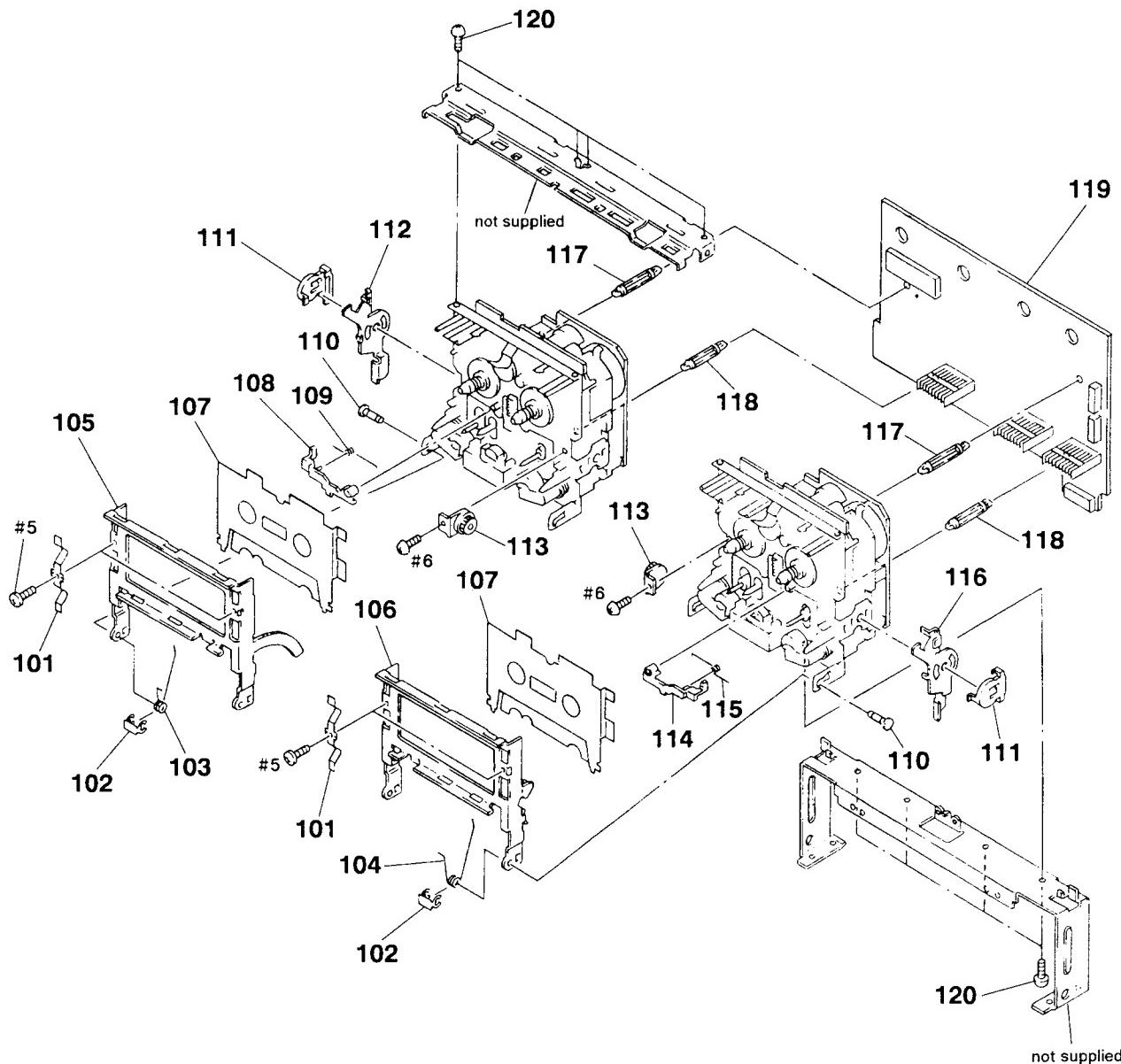
7-4. MECHANISM DECK SECTION-1

(DECK A : TCM-190RA12A)
(DECK B : TCM-190RB22A)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	X-3359-408-1	LEVER (PINCH LEVER FWD) ASSY		* 168	A-2006-399-A	MD (AX) BOARD, COMPLETE (DECK A)	
152	3-359-455-01	SPRING, TORSION		* 168	A-2006-400-A	MD (BX) BOARD, COMPLETE (DECK B)	
153	3-356-713-01	WASHER		169	3-359-466-01	BELT (FR), SQUARE	
154	3-356-714-01	WASHER		* 170	1-634-841-14	SW (A) BOARD (DECK A)	
155	X-3359-409-1	LEVER (PINCH LEVER REV) ASSY		* 170	1-634-841-14	SW (B) BOARD (DECK B)	
156	3-362-308-01	CAP (REEL)		171	3-343-419-01	HOLDER (S SENSER A)	
157	X-3362-078-1	TABLE ASSY (B), REEL		172	X-3359-404-1	TABLE ASSY, REEL	
158	3-359-424-01	GEAR (REV GEAR)		HP101	A-2003-837-F	BASE ASSY, HEAD (DECK A)	
159	3-359-430-01	SPRING(CASSETTE RETAINER), LEAF		HRP101	A-2003-838-A	DECK ASSY, HEAD (DECK B)	
160	X-3359-406-1	FLYWHEEL (FWD) ASSY					(including HE101)
161	X-3359-410-1	FLYWHEEL (REV) ASSY		IC81A	8-719-710-03	DIODE NJL5165K-B (DECK A)	
162	3-359-417-01	BELT (FLAT), CAPSTAN		IC81B	8-719-710-03	DIODE NJL5165K-B (DECK B)	
163	3-575-321-00	RETAINER, THRUST, CAPSTAN		M101A	X-3363-501-1	MOTOR ASSY (REEL) (DECK A)	
* 164	3-359-436-01	BASE (THRUST RETAINER), FITTING		M101B	X-3363-501-1	MOTOR ASSY (REEL) (DECK B)	
165	3-359-414-01	SCREW (+PTPWH 2X23)		M102A	X-3359-417-1	MOTOR ASSY (CAPSTAN) (DECK A)	
167	1-638-983-11	PC BOARD, MOTOR FLEXIBLE		M102B	X-3359-417-1	MOTOR ASSY (CAPSTAN) (DECK B)	

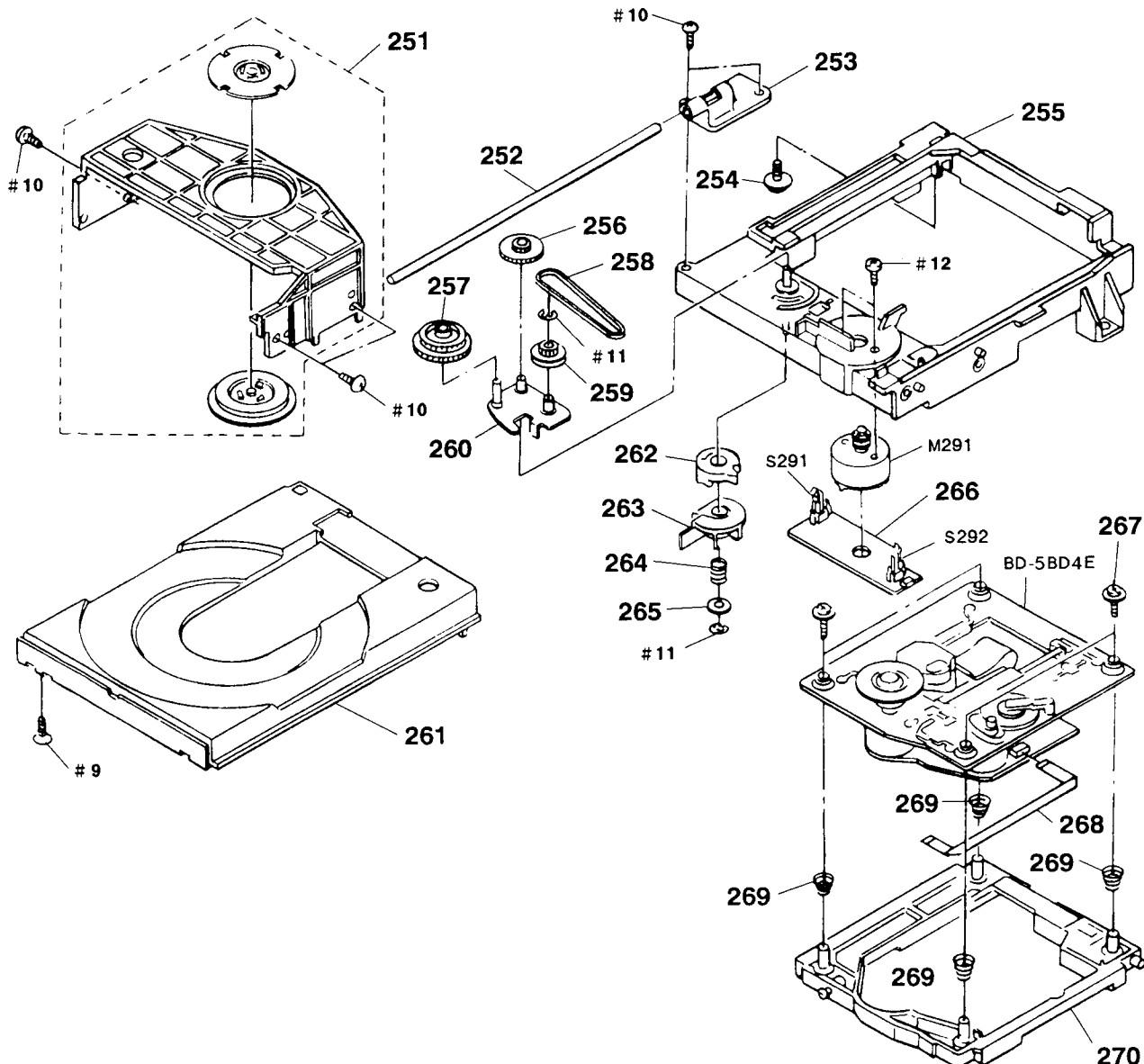
7-3. MECHANISM DECK CHASSIS SECTION



Ref. No.	Part No.	Description	Remark
101	3-340-137-01	SPRING, CASSETTE RETAINER	
102	3-367-720-01	RING (W), RETAINING	
103	3-354-959-01	SPRING (LOADING L), TORSION	
104	3-354-960-01	SPRING (LOADING R), TORSION	
105	X-3362-857-1	HOLDER (L) ASSY, CASSETTE	
106	X-3362-856-1	HOLDER (R) ASSY, CASSETTE	
107	3-367-711-01	RETAINER, CASSETTE	
108	3-354-955-01	LEVER (EJ SAFTY LEVER L)	
109	3-354-961-01	SPRING (EJ SAFTY SPRING L)	
110	3-367-721-01	SHAFT (FULCRUM SHAFT)	

Ref. No.	Part No.	Description	Remark
111	3-354-957-01	JOINT (LOCK LEVER)	
* 112	3-367-709-01	LEVER (LOCK LEVER L)	
113	3-354-963-01	DAMPER	
114	3-354-956-01	LEVER (EJ SAFTY LEVER R)	
115	3-354-962-01	SPRING (EJ SAFTY SPRING R)	
* 116	3-367-710-01	LEVER (LOCK LEVER R)	
* 117	3-682-419-31	HOLDER, P. C. B	
* 118	3-682-419-21	HOLDER, P. C. B	
* 119	A-4356-586-A	TC BOARD, COMPLETE	
120	4-928-635-01	SCREW, +BV (2.6X8) TAPPING	

**7-6. CD MECHANISM SECTION-1
(CDM13B-5BD4E)**

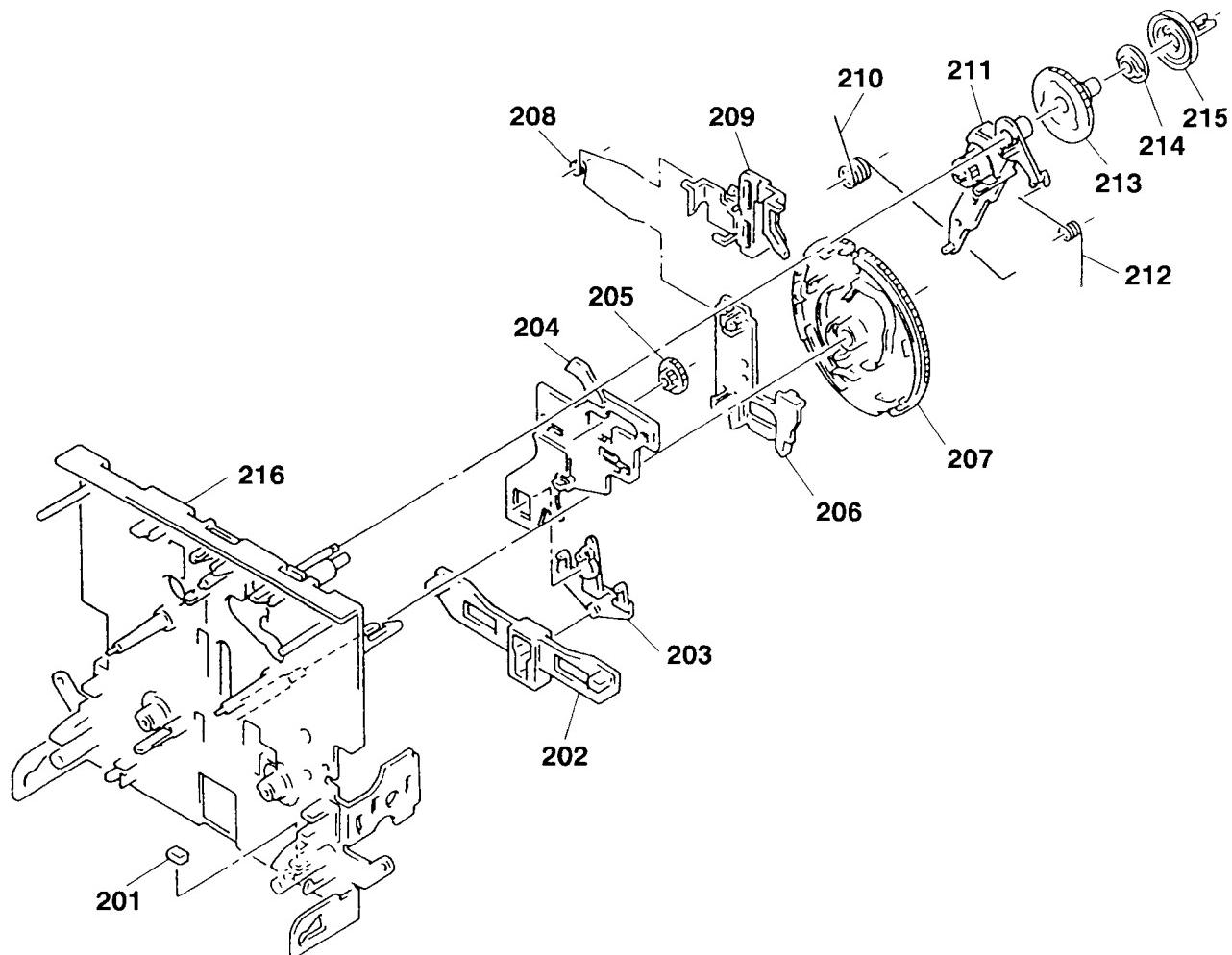


Ref. No.	Part No.	Description	Remark
251	A-4604-752-A	HOLDER (MG) ASSY	
252	4-929-764-01	SHAFT (TABLE GUIDE)	
253	4-944-006-01	BEARING	
* 254	4-917-583-21	BRACKET, YOKE	
255	X-4941-462-1	CHASSIS (MD) ASSY	
256	4-927-628-01	GEAR (C)	
257	4-927-620-01	GEAR (P)	
258	4-927-649-01	BELT	
259	4-929-724-01	PULLEY (B)	
260	X-4929-703-1	ARM ASSY, SWING	
261	4-944-012-01	TABLE, DISC	
262	4-929-727-01	CAM (A)	

Ref. No.	Part No.	Description	Remark
263	4-929-729-01	CAM (B)	
264	3-659-338-00	SPRING, COMPRESSION	
265	4-927-654-01	WASHER (LIMITER)	
* 266	1-638-308-11	LOADING BOARD	
267	4-933-134-01	SCREW (+PTPWH M2.6X6)	
268	1-590-530-11	WIRE, FLAT TYPE	
269	4-917-541-01	SPRING (B)	
270	4-929-747-01	HOLDER (BU)	
M291	A-4608-362-A	MOTOR (L) ASSY (LOADING)	
S291	1-571-924-11	SWITCH LEAF (LOAD OUT)	
S292	1-571-924-11	SWITCH LEAF (LOAD IN)	

7-5. MECHANISM DECK SECTION-2

(DECK A : TCM-190RA12A)
 (DECK B : TCM-190RB22A)



Ref. No. Part No. Description

201	3-359-469-01	SPACER
* 202	3-359-425-01	SLIDER (REVERSE SLIDER)
203	3-359-426-01	LEVER (REVERSE LEVER)
* 204	3-359-415-01	SLIDER (TRIGGER SLIDER)
205	3-359-448-01	GEAR (TRIGGER)
* 206	3-359-427-01	SLIDER (LEVERSE SLIDER)
207	3-359-420-01	GEAR (CAM GEAR)
208	3-359-454-01	SPRING, TORSION

Remark

Ref. No.	Part No.	Description	Remark
209	3-359-429-01	SLIDER (BRAKE PLATE)	
210	3-359-456-01	SPRING (TRIGGER SPRING), TORSION	
211	X-3359-405-1	LEVER (FR ARM) ASSY	
212	3-359-453-01	SPRING (FR ARM), TORSION	
213	3-359-419-01	GEAR (FR GEAR)	
214	3-359-421-01	CLUTCH (REEL DISK)	
215	3-359-418-01	PULLEY (FR PULLEY)	
216	X-3363-790-1	CHASSIS ASSY, MECHANICAL	

SECTION 8

ELECTRICAL PARTS LIST

BD

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- **RESISTORS**
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable

● Items marked "+" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

● **SEMICONDUCTORS**

In each case, u:μ, for example:

uA .. : μA. uPA.. : μPA.
uPB.. : μPB. uPC.. : μPC.. uPD.. : μPD..

● **CAPACITORS**

uF: μF

When indicating parts by reference number, please include the board.

● **COILS**

uH: μH

● **Abbreviations**

CND: Canadian

G: Germany

IT: Italian

AUS: Australian

EA: Saudi Arabia

EE: East European

MY: Malaysia

SP: Singapore

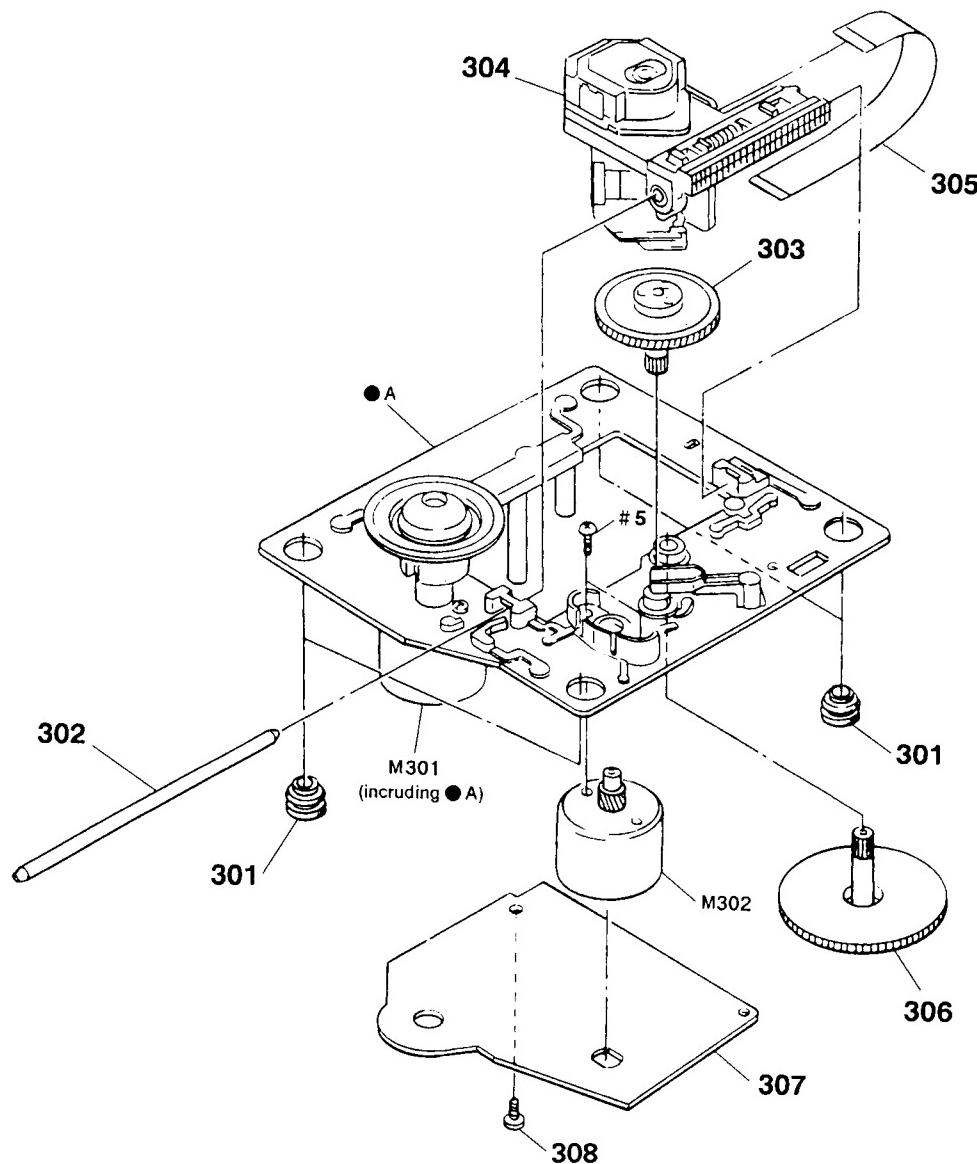
JE: Tourist

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark				
*	A-4649-541-A	BD BOARD, COMPLETE		C208	1-164-346-11	CERAMIC CHIP	1uF 16V				
< CAPACITOR >											
C101	1-163-038-00	CERAMIC CHIP	0.1uF 25V	C209	1-164-346-11	CERAMIC CHIP	1uF 16V				
C102	1-163-989-11	CERAMIC CHIP	0.033uF 10% 25V	C210	1-163-038-00	CERAMIC CHIP	0.1uF 25V				
C103	1-135-155-21	TANTALUM CHIP	4.7uF 10% 16V	C299	1-164-346-11	CERAMIC CHIP	1uF 16V				
C104	1-163-038-00	CERAMIC CHIP	0.1uF 25V	C301	1-164-346-11	CERAMIC CHIP	1uF 16V				
C105	1-126-607-11	ELECT CHIP	47uF 20% 4V	C302	1-163-038-00	CERAMIC CHIP	0.1uF 25V				
C106	1-126-607-11	ELECT CHIP	47uF 20% 4V	C303	1-163-038-00	CERAMIC CHIP	0.1uF 25V				
C107	1-126-607-11	ELECT CHIP	47uF 20% 4V	C304	1-163-038-00	CERAMIC CHIP	0.1uF 25V				
C108	1-163-038-00	CERAMIC CHIP	0.1uF 25V	C305	1-163-038-00	CERAMIC CHIP	0.1uF 25V				
C109	1-163-038-00	CERAMIC CHIP	0.1uF 25V	C306	1-163-145-00	CERAMIC CHIP	0.0015uF 5% 50V				
C110	1-163-989-11	CERAMIC CHIP	0.033uF 10% 25V	C307	1-163-145-00	CERAMIC CHIP	0.0015uF 5% 50V				
C111	1-164-346-11	CERAMIC CHIP	1uF 16V	C308	1-164-346-11	CERAMIC CHIP	1uF 16V				
C112	1-164-232-11	CERAMIC CHIP	0.01uF 50V	C309	1-164-346-11	CERAMIC CHIP	1uF 16V				
C113	1-164-232-11	CERAMIC CHIP	0.01uF 50V	C310	1-163-125-00	CERAMIC CHIP	220PF 5% 50V				
C114	1-164-695-11	CERAMIC CHIP	0.0022uF 5% 50V	C311	1-163-125-00	CERAMIC CHIP	220PF 5% 50V				
C115	1-164-695-11	CERAMIC CHIP	0.0022uF 5% 50V	C312	1-164-346-11	CERAMIC CHIP	1uF 16V				
< CONNECTOR >											
C117	1-163-038-00	CERAMIC CHIP	0.1uF 25V	CN101	1-580-858-11	SOCKET, CONNECTOR (SMT)	5P				
C118	1-163-038-00	CERAMIC CHIP	0.1uF 25V	CN102	1-580-866-11	SOCKET, CONNECTOR (SMT)	12P				
C119	1-164-695-11	CERAMIC CHIP	0.0022uF 5% 50V	CN103	1-580-872-41	SOCKET, CONNECTOR (SMT)	19P				
C120	1-163-989-11	CERAMIC CHIP	0.033uF 10% 25V	< DIODE >							
C151	1-163-019-00	CERAMIC CHIP	0.0068uF 10% 50V	D101	8-719-422-12	DIODE	MA8039				
C152	1-164-346-11	CERAMIC CHIP	1uF 16V	D201	8-719-016-74	DIODE	1SS352				
C153	1-163-135-00	CERAMIC CHIP	560PF 5% 50V	< IC >							
C154	1-164-695-11	CERAMIC CHIP	0.0022uF 5% 50V	IC101	8-752-053-73	IC	CXA1372AQ				
C155	1-163-023-00	CERAMIC CHIP	0.015uF 5% 50V	IC102	8-759-823-48	IC	LA6525M				
C171	1-163-038-00	CERAMIC CHIP	0.1uF 25V	IC103	8-759-636-20	IC	M54641FP				
C172	1-163-038-00	CERAMIC CHIP	0.1uF 25V	IC201	8-752-352-93	IC	CXD2500BQ				
C173	1-163-038-00	CERAMIC CHIP	0.1uF 25V	IC202	8-759-059-86	IC	uPD75116GF-F21-3BE				
C174	1-163-038-00	CERAMIC CHIP	0.1uF 25V	IC203	8-759-098-27	IC	MSM6538-01GS-VKR1				
C201	1-163-809-11	CERAMIC CHIP	0.047uF 10% 25V	IC301	8-759-155-52	IC	PCM-67U-B				
C202	1-163-145-00	CERAMIC CHIP	0.0015uF 5% 50V	IC302	8-759-996-43	IC	RC4558PS				
C203	1-164-232-11	CERAMIC CHIP	0.01uF 50V	< JACK >							
C204	1-164-005-11	CERAMIC CHIP	0.47uF 25V	J201	1-216-296-00	METAL CHIP	0 5% 1/8W				
C205	1-164-346-11	CERAMIC CHIP	1uF 16V								
C206	1-163-093-00	CERAMIC CHIP	10PF 5% 50V								
C207	1-163-093-00	CERAMIC CHIP	10PF 5% 50V								

**7-7. CD MECHANISM SECTION-2
(BU-5BD4E)**



The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
301	4-933-126-01	INSULATOR (A)	
302	4-917-565-01	SHAFT, SLED	
303	4-917-567-01	GEAR (M)	
Δ 304	8-848-144-11	DEVICE, OPTICAL KSS-240A	
305	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	

Ref. No.	Part No.	Description	Remark
306	4-917-564-01	GEAR (P), FLATNESS	
* 307	A-4649-541-A	BD (A) BOARD, COMPLETE	
308	4-951-620-01	SCREW (2.6X8), +BVTP	
M301	X-4917-523-3	MOTOR ASSY (SPINDLE)	
M302	X-4917-504-1	MOTOR ASSY (SLED)	

DISPLAY

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
C503	1-136-177-00	FLIM	1uF	5%	50V				< FLUORESCENT INDICATOR TUBE >		
C504	1-164-159-11	CERAMIC	0. 1uF		50V	FL501	1-517-122-11	INDICATOR TUBE, FLUORESCENT			
C505	1-126-177-11	ELECT	100uF	20%	10V				< IC >		
C506	1-164-159-11	CERAMIC	0. 1uF		50V	IC501	8-759-088-84	IC uPD78042GF-015-3B9			
C507	1-126-157-11	ELECT	10uF	20%	16V	IC502	8-759-500-31	IC X24C01P			
C508	1-164-159-11	CERAMIC	0. 1uF		50V	IC503	8-759-520-90	IC PST572E			
C509	1-124-584-00	ELECT	100uF	20%	10V	IC504	8-749-923-80	IC GP1U90XB			
C510	1-162-205-31	CERAMIC	18PF	5%	50V				< TRANSISTOR >		
C511	1-162-205-31	CERAMIC	18PF	5%	50V	Q501	8-729-900-80	TRANSISTOR DTC114ES			
C512	1-164-159-11	CERAMIC	0. 1uF		50V	Q502	8-729-900-61	TRANSISTOR DTA114ES			
C513	1-164-159-11	CERAMIC	0. 1uF		50V	Q503	8-729-900-80	TRANSISTOR DTC114ES			
						Q504	8-729-900-80	TRANSISTOR DTC114ES			
									(H61:AEP, G, IT, EE/H61M)		
						Q507	8-729-620-05	TRANSISTOR 2SC2603-EF			
						Q508	8-729-900-80	TRANSISTOR DTC114ES			
						Q509	8-729-900-80	TRANSISTOR DTC114ES			
									(H61:AEP, G, IT, EE/H61M)		
									(H61:AEP, G, IT, EE/H61M)		
									(H61:AEP, G, IT, EE/H61M)		
									< RESISTOR >		
						R501	1-249-419-11	CARBON 1. 5K	5%	1/4W	
						R502	1-249-405-11	CARBON 100	5%	1/4W	
						R503	1-249-406-11	CARBON 120	5%	1/4W	
						R504	1-249-406-11	CARBON 120	5%	1/4W	
						R505	1-249-407-11	CARBON 150	5%	1/4W	
						R506	1-249-408-11	CARBON 180	5%	1/4W	
						R507	1-249-409-11	CARBON 220	5%	1/4W	
						R508	1-249-410-11	CARBON 270	5%	1/4W	
						R509	1-249-411-11	CARBON 330	5%	1/4W	
						R510	1-249-413-11	CARBON 470	5%	1/4W	
						R511	1-249-414-11	CARBON 560	5%	1/4W	
						R512	1-249-419-11	CARBON 1. 5K	5%	1/4W	
						R513	1-249-405-11	CARBON 100	5%	1/4W	
						R514	1-249-406-11	CARBON 120	5%	1/4W	
						R515	1-249-406-11	CARBON 120	5%	1/4W	
						R516	1-249-407-11	CARBON 150	5%	1/4W	
						R517	1-249-408-11	CARBON 180	5%	1/4W	
						R518	1-249-409-11	CARBON 220	5%	1/4W	
						R519	1-249-410-11	CARBON 270	5%	1/4W	
						R520	1-249-411-11	CARBON 330	5%	1/4W	
						R521	1-249-413-11	CARBON 470	5%	1/4W	
						R522	1-249-414-11	CARBON 560	5%	1/4W	
						R523	1-249-416-11	CARBON 820	5%	1/4W	
						R524	1-249-418-11	CARBON 1. 2K	5%	1/4W	
						R525	1-249-421-11	CARBON 2. 2K	5%	1/4W	
						R529	1-249-429-11	CARBON 10K	5%	1/4W	
						R530	1-249-429-11	CARBON 10K	5%	1/4W	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark	
J203	1-216-296-00	METAL CHIP	0 5% 1/8W	R212	1-239-039-11	RESISTOR, NETWORK 12K		
J205	1-216-295-00	METAL CHIP	0 5% 1/10W	R214	1-239-039-11	RESISTOR, NETWORK 22K		
J206	1-216-296-00	METAL CHIP	0 5% 1/8W	R218	1-216-065-00	METAL CHIP 4.7K 5%	1/10W	
J207	1-216-296-00	METAL CHIP	0 5% 1/8W	R219	1-216-073-00	METAL CHIP 10K 5%	1/10W	
J208	1-216-295-00	METAL CHIP	0 5% 1/10W	R220	1-216-001-00	METAL CHIP 10 5%	1/10W	
J209	1-216-296-00	METAL CHIP	0 5% 1/8W	R222	1-236-427-11	RESISTOR, NETWORK 18K		
J210	1-216-296-00	METAL CHIP	0 5% 1/8W	R223	1-216-081-00	METAL CHIP 22K 5%	1/10W	
J211	1-216-296-00	METAL CHIP	0 5% 1/8W	R224	1-216-081-00	METAL CHIP 22K 5%	1/10W	
J212	1-216-296-00	METAL CHIP	0 5% 1/8W	R225	1-216-081-00	METAL CHIP 22K 5%	1/10W	
J215	1-216-295-00	METAL CHIP	0 5% 1/10W	R226	1-216-081-00	METAL CHIP 22K 5%	1/10W	
	< TRANSISTOR >			R230	1-216-051-00	METAL CHIP 1.2K 5%	1/10W	
Q101	8-729-805-45	TRANSISTOR	2SC3395	R231	1-216-051-00	METAL CHIP 1.2K 5%	1/10W	
Q201	8-729-602-21	TRANSISTOR	2SC4154	R232	1-216-041-00	METAL CHIP 470 5%	1/10W	
	< RESISTOR >			R233	1-216-041-00	METAL CHIP 470 5%	1/10W	
R101	1-216-097-00	METAL CHIP	100K 5% 1/10W	R234	1-216-051-00	METAL CHIP 1.2K 5%	1/10W	
R102	1-216-097-00	METAL CHIP	100K 5% 1/10W	R235	1-216-051-00	METAL CHIP 1.2K 5%	1/10W	
R103	1-216-091-00	METAL CHIP	56K 5% 1/10W	R236	1-236-413-11	RESISTOR, NETWORK 1.2K		
R104	1-216-099-00	METAL CHIP	120K 5% 1/10W	R301	1-236-413-11	RESISTOR, NETWORK 1.2K		
R105	1-216-069-00	METAL CHIP	6.8K 5% 1/10W	R303	1-216-055-00	METAL CHIP 1.8K 5%	1/10W	
R106	1-216-061-00	METAL CHIP	3.3K 5% 1/10W	R304	1-216-055-00	METAL CHIP 1.8K 5%	1/10W	
R107	1-216-114-00	METAL GLAZE	510K 5% 1/10W	R305	1-216-097-00	METAL CHIP 100K 5%	1/10W	
R108	1-216-105-00	METAL CHIP	220K 5% 1/10W	R306	1-216-097-00	METAL CHIP 100K 5%	1/10W	
R109	1-216-061-00	METAL CHIP	3.3K 5% 1/10W		< VARIABLE RESISTOR >			
R110	1-216-049-00	METAL CHIP	1K 5% 1/10W	RV101	1-241-395-11	RES, ADJ, METAL GLAZE 10K		
R111	1-216-049-00	METAL CHIP	1K 5% 1/10W	RV102	1-241-395-11	RES, ADJ, METAL GLAZE 10K		
R112	1-216-083-00	METAL CHIP	27K 5% 1/10W		< SWITCH >			
R113	1-216-071-00	METAL CHIP	8.2K 5% 1/10W	SW101	1-572-085-11	SWITCH, LEAF (LIMIT)		
R114	1-216-105-00	METAL CHIP	220K 5% 1/10W		< VIBRATOR >			
R115	1-216-073-00	METAL CHIP	10K 5% 1/10W	X201	1-567-908-11	VIBRATOR, CRYSTAL (16MHz)		
R116	1-216-085-00	METAL CHIP	33K 5% 1/10W	X202	1-579-216-11	VIBRATOR, CERAMIC (4MHz)		
R117	1-216-093-00	METAL CHIP	68K 5% 1/10W	*****	*****	*****	*****	
R118	1-216-081-00	METAL CHIP	22K 5% 1/10W	*	A-4356-594-A	DISPLAY BOARD, COMPLETE (H61M:US, CND)		
R119	1-236-427-11	RESISTOR, NETWORK 18K		*	A-4356-600-A	DISPLAY BOARD, COMPLETE (H61:AEP/H61M:AEP)		
R120	1-216-079-00	METAL CHIP	18K 5% 1/10W	*	A-4356-601-A	DISPLAY BOARD, COMPLETE (H61:G)		
R121	1-216-049-00	METAL CHIP	1K 5% 1/10W	*	A-4356-602-A	DISPLAY BOARD, COMPLETE (H61:IT)		
R122	1-216-001-00	METAL CHIP	10 5% 1/10W	*	A-4356-603-A	DISPLAY BOARD, COMPLETE (H61:E, AUS, EA, MY, SP)		
R123	1-216-001-00	METAL CHIP	10 5% 1/10W	*	A-4356-593-A	DISPLAY BOARD, COMPLETE (H61M:UK)		
R124	1-216-001-00	METAL CHIP	10 5% 1/10W	*	A-4356-604-A	DISPLAY BOARD, COMPLETE (H61:EE)		
R125	1-216-061-00	METAL CHIP	3.3K 5% 1/10W	*	A-4360-498-A	DISPLAY BOARD, COMPLETE (H61:JE)		
R126	1-216-073-00	METAL CHIP	10K 5% 1/10W	*****	*****	*****	*****	
R127	1-216-061-00	METAL CHIP	3.3K 5% 1/10W		< CAPACITOR >			
R128	1-216-073-00	METAL CHIP	10K 5% 1/10W		C501	1-164-159-11	CERAMIC 0.1uF	50V
R205	1-216-097-00	METAL CHIP	100K 5% 1/10W		C502	1-164-159-11	CERAMIC 0.1uF	50V
R209	1-216-081-00	METAL CHIP	22K 5% 1/10W					

DISPLAY

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R531	1-249-429-11	CARBON	10K 5% 1/4W	R582	1-249-425-11	CARBON	4.7K 5% 1/4W
R532	1-249-429-11	CARBON	10K 5% 1/4W	R583	1-249-417-11	CARBON	1K 5% 1/4W
R533	1-249-417-11	CARBON	1K 5% 1/4W	R584	1-249-417-11	CARBON	1K 5% 1/4W
R534	1-249-417-11	CARBON	1K 5% 1/4W	R585	1-249-417-11	CARBON	1K 5% 1/4W
R535	1-249-417-11	CARBON	1K 5% 1/4W	R586	1-249-417-11	CARBON	1K 5% 1/4W
R536	1-249-419-11	CARBON	1.5K 5% 1/4W	R5001	1-247-844-11	CARBON	3.6K 5% 1/4W (H61M:US, CND)
R537	1-249-423-11	CARBON	3.3K 5% 1/4W	R5001	1-249-413-11	CARBON	470 5% 1/4W (H61:G)
R538	1-249-417-11	CARBON	1K 5% 1/4W	R5001	1-247-832-11	CARBON	1.1K 5% 1/4W(H61:IT)
R539	1-249-417-11	CARBON	1K 5% 1/4W	R5001	1-249-426-11	CARBON	5.6K 5% 1/4W(H61:EE)
R540	1-249-417-11	CARBON	1K 5% 1/4W	R5001	1-249-421-11	CARBON	2.2K 5% 1/4W (H61:E, AUS, EA, MY, SP)
R541	1-249-417-11	CARBON	1K 5% 1/4W	R5001	1-249-429-11	CARBON	10K 5% 1/4W(H61:JE)
R542	1-249-417-11	CARBON	1K 5% 1/4W				< VARIABLE RESISTOR >
R543	1-249-417-11	CARBON	1K 5% 1/4W	RV501	1-223-300-11	RES, VAR, SLIDE 50K (ECHO)	
R544	1-249-417-11	CARBON	1K 5% 1/4W				(H61:E, AUS, EA, MY, SP, JE)
R545	1-249-417-11	CARBON	1K 5% 1/4W	RV502	1-223-300-11	RES, VAR, SLIDE 50K (MIC LEVEL)	
R546	1-249-417-11	CARBON	1K 5% 1/4W				(H61:E, AUS, EA, MY, SP, JE)
R547	1-249-417-11	CARBON	1K 5% 1/4W				< SWITCH >
R548	1-249-417-11	CARBON	1K 5% 1/4W	S501	1-572-184-11	SWITCH, KEYBOARD	
R549	1-249-417-11	CARBON	1K 5% 1/4W				(CLOCK DISPLAY (CLOCK SET))
R550	1-249-429-11	CARBON	10K 5% 1/4W	S502	1-572-184-11	SWITCH, KEYBOARD (TIMER CONT)	
R551	1-249-429-11	CARBON	10K 5% 1/4W	S503	1-572-184-11	SWITCH, KEYBOARD (SLEEP)	
R552	1-249-429-11	CARBON	10K 5% 1/4W	S504	1-572-184-11	SWITCH, KEYBOARD (MEMORY (NEXT))	
R553	1-249-429-11	CARBON	10K 5% 1/4W	S505	1-572-184-11	SWITCH, KEYBOARD (AUTO)	
R554	1-249-437-11	CARBON	47K 5% 1/4W	S506	1-572-184-11	SWITCH, KEYBOARD (MODE)	
R555	1-249-437-11	CARBON	47K 5% 1/4W	S507	1-572-184-11	SWITCH, KEYBOARD (TUNING +)	
R556	1-249-437-11	CARBON	47K 5% 1/4W	S508	1-572-184-11	SWITCH, KEYBOARD (TUNING -)	
R557	1-249-437-11	CARBON	47K 5% 1/4W	S509	1-572-184-11	SWITCH, KEYBOARD (BAND)	
R558	1-249-437-11	CARBON	47K 5% 1/4W	S510	1-572-184-11	SWITCH, KEYBOARD (PRESET/TIMER +)	
R559	1-249-437-11	CARBON	47K 5% 1/4W	S511	1-572-184-11	SWITCH, KEYBOARD (PRESET/TIMER -)	
R560	1-249-437-11	CARBON	47K 5% 1/4W	S512	1-572-184-11	SWITCH, KEYBOARD (POWER (ON/STANDBY))	
R561	1-249-437-11	CARBON	47K 5% 1/4W	S513	1-572-184-11	SWITCH, KEYBOARD (TIMER SET (CLOCK SET))	
R562	1-249-437-11	CARBON	47K 5% 1/4W	S514	1-572-184-11	SWITCH, KEYBOARD (DBFB)	
R563	1-249-437-11	CARBON	47K 5% 1/4W	S515	1-572-184-11	SWITCH, KEYBOARD (TAPE)	
R564	1-249-437-11	CARBON	47K 5% 1/4W	S516	1-572-184-11	SWITCH, KEYBOARD (CD)	
R565	1-249-437-11	CARBON	47K 5% 1/4W	S517	1-572-184-11	SWITCH, KEYBOARD (TUNER)	
R566	1-249-417-11	CARBON	1K 5% 1/4W	S518	1-572-184-11	SWITCH, KEYBOARD (PHONO)	
R567	1-249-429-11	CARBON	10K 5% 1/4W				(H61:AEP, G, IT, EE/H61M:UK)
R568	1-249-425-11	CARBON	4.7K 5% 1/4W	S519	1-572-184-11	SWITCH, KEYBOARD (VIDEO)	
R569	1-249-429-11	CARBON	10K 5% 1/4W				(H61:E, EA, AUS, MY, SP, JE/H61:EA, AUS, MY, SP, JE)
R570	1-249-411-11	CARBON	330 5% 1/4W	S519	1-572-184-11	SWITCH, KEYBOARD (ROCK)	
R571	1-249-411-11	CARBON	330 5% 1/4W				(H61:AEP, G, IT, EE/H61M)
R572	1-249-414-11	CARBON	560 5% 1/4W	S519	1-572-184-11	SWITCH, KEYBOARD (STEREO)	
R573	1-249-416-11	CARBON	820 5% 1/4W				(H61:E, EA, AUS, MY, SP, JE)
R574	1-249-429-11	CARBON	10K 5% 1/4W	S520	1-572-184-11	SWITCH, KEYBOARD (POPS)	
R575	1-249-429-11	CARBON	10K 5% 1/4W				(H61:AEP, G, IT, EE/H61M)
R576	1-249-429-11	CARBON	10K 5% 1/4W	S520	1-572-184-11	SWITCH, KEYBOARD (MAIN)	
R577	1-249-414-11	CARBON	560 5% 1/4W				(H61:E, EA, AUS, MY, SP, JE/H61:E, EA, AUS, MY, SP, JE)
R578	1-249-437-11	CARBON	47K 5% 1/4W				
R579	1-249-429-11	CARBON	47K 5% 1/4W				
R580	1-249-437-11	CARBON	47K 5% 1/4W				
R581	1-249-437-11	CARBON	47K 5% 1/4W				

DISPLAY

ECHO

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
S521	1-572-184-11	SWITCH, KEYBOARD (JAZZ)	(H61:AEP, G, IT, EE/H61M)	C629	1-124-907-11	ELECT	10uF 20% 50V (H61:E, AUS, EA, MY, SP, JE)
S521	1-572-184-11	SWITCH, KEYBOARD (SUB)	(H61:E, EA, AUS, MY, SP, JE)	C630	1-162-282-31	CERAMIC	100PF 10% 50V (H61:E, AUS, EA, MY, SP, JE)
S522	1-572-184-11	SWITCH, KEYBOARD (HALL)	(H61:AEP, G, IT, EE/H61M)	C631	1-162-286-31	CERAMIC	220PF 10% 50V (H61:E, AUS, EA, MY, SP, JE)
S522	1-572-184-11	SWITCH, KEYBOARD (KARAOKE PON)	(H61:E, EA, AUS, MY, SP, JE)	C632	1-161-379-00	CERAMIC	0.01uF 20% 25V (H61:E, AUS, EA, MY, SP, JE)
S523	1-572-184-11	SWITCH, KEYBOARD (BGM)	(H61:AEP, G, IT, EE/H61M)	C633	1-161-379-00	CERAMIC	0.01uF 20% 25V (H61:E, AUS, EA, MY, SP, JE)
S523	1-572-184-11	SWITCH, KEYBOARD (PRESET)	(H61:E, EA, AUS, MY, SP, JE)	C634	1-124-907-11	ELECT	10uF 20% 50V (H61:E, AUS, EA, MY, SP, JE)
S524	1-572-184-11	SWITCH, KEYBOARD (DIRECT)	(H61:E, EA, AUS, MY, SP, JE)	C635	1-162-300-11	CERAMIC	0.01uF (H61:E, AUS, EA, MY, SP, JE)
S525	1-572-184-11	SWITCH, KEYBOARD (S-SUR)					
< VIBRATOR >							
X5001	1-567-098-00	OSCILLATOR, CRYSTAL (32.768kHz)					

*	A-4356-599-A	ECHO BOARD, COMPLETE	(H61:E, AUS, EA, MY, SP, JE)				

< CAPACITOR >							
C610	1-126-101-11	ELECT	100uF 20% 16V (H61:E, AUS, EA, MY, SP, JE)	D610	8-719-028-15	LED LED-SX-TP	(H61:E, AUS, EA, MY, SP, JE)
C611	1-164-159-11	CERAMIC	0.1uF 50V (H61:E, AUS, EA, MY, SP, JE)				
C612	1-162-291-31	CERAMIC	560PF 10% 50V (H61:E, AUS, EA, MY, SP, JE)	IC602	8-759-634-51	IC M5218A	(H61:E, AUS, EA, MY, SP, JE)
C613	1-124-903-11	ELECT	1uF 20% 50V (H61:E, AUS, EA, MY, SP, JE)	IC610	8-759-166-05	IC M65831PK	(H61:E, AUS, EA, MY, SP, JE)
C614	1-130-480-00	CERAMIC	0.0056uF 5% 50V (H61:E, AUS, EA, MY, SP, JE)				
C615	1-124-903-11	ELECT	1uF 20% 50V (H61:E, AUS, EA, MY, SP, JE)				
C616	1-161-379-00	CERAMIC	0.01uF 20% 25V (H61:E, AUS, EA, MY, SP, JE)				
C617	1-164-159-11	CERAMIC	0.1uF 50V (H61:E, AUS, EA, MY, SP, JE)				
C618	1-124-910-11	ELECT	47uF 20% 50V (H61:E, AUS, EA, MY, SP, JE)				
C619	1-164-159-11	CERAMIC	0.1uF 50V (H61:E, AUS, EA, MY, SP, JE)				
C620	1-164-159-11	CERAMIC	0.1uF 50V (H61:E, AUS, EA, MY, SP, JE)				
C621	1-164-159-11	CERAMIC	0.1uF 50V (H61:E, AUS, EA, MY, SP, JE)				
C622	1-161-374-11	CERAMIC	0.0015uF 20% 50V (H61:E, AUS, EA, MY, SP, JE)				
C623	1-124-903-11	ELECT	1uF 20% 50V (H61:E, AUS, EA, MY, SP, JE)				
C624	1-164-159-11	CERAMIC	0.1uF 50V (H61:E, AUS, EA, MY, SP, JE)				
C625	1-164-159-11	CERAMIC	0.1uF 50V (H61:E, AUS, EA, MY, SP, JE)				
< DIODE >							
D610	8-719-028-15	LED LED-SX-TP	(H61:E, AUS, EA, MY, SP, JE)				
< IC >							
IC602	8-759-634-51	IC M5218A	(H61:E, AUS, EA, MY, SP, JE)				
IC610	8-759-166-05	IC M65831PK	(H61:E, AUS, EA, MY, SP, JE)				
< COIL >							
L610	1-408-104-00	INDUCTOR	1mH (H61:E, AUS, EA, MY, SP, JE)				
< RESISTOR >							
R610	1-247-903-00	CARBON	1M 5% 1/4W (H61:E, AUS, EA, MY, SP, JE)				
R611	1-249-429-11	CARBON	10K 5% 1/4W (H61:E, AUS, EA, MY, SP, JE)				
R612	1-249-429-11	CARBON	10K 5% 1/4W (H61:E, AUS, EA, MY, SP, JE)				
R613	1-249-431-11	CARBON	15K 5% 1/4W (H61:E, AUS, EA, MY, SP, JE)				
R614	1-249-431-11	CARBON	15K 5% 1/4W (H61:E, AUS, EA, MY, SP, JE)				
R615	1-249-431-11	CARBON	15K 5% 1/4W (H61:E, AUS, EA, MY, SP, JE)				
R616	1-249-431-11	CARBON	15K 5% 1/4W (H61:E, AUS, EA, MY, SP, JE)				
R617	1-249-429-11	CARBON	10K 5% 1/4W (H61:E, AUS, EA, MY, SP, JE)				
R618	1-249-436-11	CARBON	39K 5% 1/4W (H61:E, AUS, EA, MY, SP, JE)				

MAIN

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
< ANTENNA >											
ANT1	1-501-321-51	ANTENNA, TELESCOPIC (H61)				C39	1-124-903-11	ELECT	1uF	20%	50V
						C40	1-161-379-00	CERAMIC	0.01uF	20%	25V
						C41	1-123-382-00	ELECT	3.3uF	20%	100V
						C42	1-124-907-11	ELECT	10uF	20%	50V
						C43	1-161-379-00	CERAMIC	0.01uF	20%	25V
						C44	1-161-377-00	CERAMIC	0.0047uF	30%	16V
						C45	1-162-294-31	CERAMIC	0.001uF	10%	50V
											(H61:AEP, EE, E, AUS, EA, MY, SP, JE/H61M:AEP, UK)
C1	1-162-195-31	CERAMIC	4.7PF	10%	50V	C45	1-162-291-31	CERAMIC	560PF	10	50V
											(H61:G, IT)
C2	1-124-907-11	ELECT	10uF	20%	50V	C46	1-162-282-31	CERAMIC	100PF	10%	50V
C3	1-161-379-00	CERAMIC	0.01uF	20%	25V						(H61:G, IT)
C4	1-162-294-31	CERAMIC	0.001uF	10%	50V	C47	1-124-903-11	ELECT	1uF	20%	50V
C5	1-161-494-00	CERAMIC	0.022uF		25V	C48	1-161-494-00	CERAMIC	0.022uF		25V
											(H61/H61M:AEP, UK)
						C48	1-136-159-00	FILM	0.033uF	5%	50V
C6	1-162-195-31	CERAMIC	4.7PF	10%	50V						(H61M:US, CND)
						C49	1-161-494-00	CERAMIC	0.022uF		25V
											(H61/H61M:AEP, UK)
C7	1-136-162-00	FILM	0.056uF	5%	50V	C49	1-136-159-00	FILM	0.033uF	5%	50V
											(H61M:US, CND)
C8	1-164-159-11	CERAMIC	0.1uF		50V	C50	1-124-903-11	ELECT	1uF	20%	50V
						C51	1-124-903-11	ELECT	1uF	20%	50V
C9	1-102-120-00	CERAMIC	0.0018uF	10%	50V	C52	1-124-903-11	ELECT	1uF	20%	50V
						C53	1-124-903-11	ELECT	1uF	20%	50V
C10	1-161-374-11	CERAMIC	0.0015uF	20%	50V	C54	1-161-375-00	CERAMIC	0.0022uF	20%	50V
						C55	1-161-375-00	CERAMIC	0.0022uF	20%	50V
C11	1-161-494-00	CERAMIC	0.022uF		25V	C56	1-124-477-11	ELECT	47uF	20%	25V
						C57	1-126-176-11	ELECT	220uF	20%	10V
C12	1-161-494-00	CERAMIC	0.022uF		25V	C58	1-161-379-00	CERAMIC	0.01uF	20%	25V
C13	1-162-198-31	CERAMIC	8.2PF	10%	50V	C59	1-162-294-31	CERAMIC	0.001uF	10%	50V
C14	1-124-463-00	ELECT	0.1uF	20%	50V	C60	1-162-294-31	CERAMIC	0.001uF	10%	50V
C15	1-136-153-00	FILM	0.01uF	5%	50V	C61	1-130-478-00	MYLAR	0.0039uF	5%	50V
C16	1-124-925-11	ELECT	2.2uF	20%	100V	C62	1-130-478-00	MYLAR	0.0039uF	5%	50V
C17	1-136-157-00	FILM	0.022uF	5%	50V	C64	1-162-294-31	CERAMIC	0.001uF	10%	50V
						C65	1-164-064-11	CERAMIC	56PF	5%	50V
C18	1-136-157-00	FILM	0.022uF	5%	50V	C581	1-124-927-11	ELECT	4.7uF	20%	100V
						C582	1-124-907-11	ELECT	10uF	20%	50V
C19	1-124-902-00	ELECT	0.47uF	20%	50V	C583	1-136-177-00	FILM	1uF	5%	50V
						C601	1-162-286-31	CERAMIC	220PF	10%	50V
C20	1-124-477-11	ELECT	47uF	20%	25V	C602	1-162-286-31	CERAMIC	220PF	10%	50V
C21	1-161-379-00	CERAMIC	0.01uF	20%	25V	C603	1-162-282-31	CERAMIC	100PF	10%	50V
C22	1-124-907-11	ELECT	10uF	20%	50V						(H61:AEP, G, IT, EE/H61M:AEP, UK)
C23	1-161-379-00	CERAMIC	0.01uF	20%	25V	C604	1-162-282-31	CERAMIC	100PF	10%	50V
C24	1-161-379-00	CERAMIC	0.01uF	20%	25V						(H61:AEP, G, IT, EE/H61M:AEP, UK)
						C605	1-124-902-00	ELECT	0.47uF	20%	50V
C25	1-164-056-11	CERAMIC	27PF	5%	50V						(H61:AEP, G, IT, EE/H61M:AEP, UK)
C26	1-164-056-11	CERAMIC	27PF	5%	50V	C606	1-124-902-00	ELECT	0.47uF	20%	50V
C27	1-161-379-00	CERAMIC	0.01uF	20%	25V						(H61:AEP, G, IT, EE/H61M:AEP, UK)
C28	1-161-379-00	CERAMIC	0.01uF	20%	25V	C607	1-162-282-31	CERAMIC	100PF	10%	50V
C29	1-161-379-00	CERAMIC	0.01uF	20%	25V						(H61:AEP, G, IT, EE/H61M:AEP, UK)
						C608	1-162-282-31	CERAMIC	100PF	10%	50V
C31	1-161-379-00	CERAMIC	0.01uF	20%	25V						(H61:AEP, G, IT, EE/H61M:AEP, UK)
C32	1-124-907-11	ELECT	10uF	20%	50V						
C33	1-161-379-00	CERAMIC	0.01uF	20%	25V						
C34	1-161-379-00	CERAMIC	0.01uF	20%	25V						
C35	1-161-379-00	CERAMIC	0.01uF	20%	25V						
C36	1-161-379-00	CERAMIC	0.01uF	20%	25V						
C37	1-124-925-11	ELECT	2.2uF	20%	100V						
C38	1-124-903-11	ELECT	1uF	20%	50V						

Ref. No.	Part No.	Description	Remark
R619	1-249-431-11	CARBON	15K 5% 1/4W (H61:E, AUS, EA, MY, SP, JE)
R623	1-247-887-00	CARBON	220K 5% 1/4W (H61:E, AUS, EA, MY, SP, JE)
R624	1-247-887-00	CARBON	220K 5% 1/4W (H61:E, AUS, EA, MY, SP, JE)
R625	1-249-429-11	CARBON	10K 5% 1/4W (H61:E, AUS, EA, MY, SP, JE)
R626	1-249-429-11	CARBON	10K 5% 1/4W (H61:E, AUS, EA, MY, SP, JE)
R627	1-249-429-11	CARBON	10K 5% 1/4W (H61:E, AUS, EA, MY, SP, JE)
R628	1-249-431-11	CARBON	15K 5% 1/4W (H61:E, AUS, EA, MY, SP, JE)
R629	1-247-887-00	CARBON	220K 5% 1/4W (H61:E, AUS, EA, MY, SP, JE)
R630	1-247-887-00	CARBON	220K 5% 1/4W (H61:E, AUS, EA, MY, SP, JE)
R631	1-249-417-11	CARBON	1K 5% 1/4W F (H61:E, AUS, EA, MY, SP, JE)

< VIBRATOR >

X610 1-577-358-21 VIBRATOR, SERAMIC (2MHz)
(H61:E, AUS, EA, MY, SP, JE)

* 1-646-897-11 JACK BOARD

< CAPACITOR >

C250	1-162-282-31	CERAMIC	100PF	10%	50V
C251	1-162-282-31	CERAMIC	100PF	10%	50V
C252	1-126-157-11	ELECT	10uF	20%	16V
C260	1-162-294-31	CERAMIC	0.001uF	10%	50V
			(H61:E, AUS, EA, MY, SP, JE/H61M:US, CND)		
C261	1-162-294-31	CERAMIC	0.001uF	10%	50V
			(H61:E, AUS, EA, MY, SP, JE/H61M:US, CND)		
C262	1-162-282-31	CERAMIC	100PF	10%	50V
			(H61:E, AUS, EA, MY, SP, JE/H61M:US, CND)		
C263	1-162-290-31	CERAMIC	470PF	10%	50V
			(H61:E, AUS, EA, MY, SP, JE/H61M:US, CND)		
C264	1-124-463-00	ELECT	0.1uF	20%	50V
			(H61:E, AUS, EA, MY, SP, JE/H61M:US, CND)		
C265	1-124-463-00	ELECT	0.1uF	20%	50V
			(H61:E, AUS, EA, MY, SP, JE/H61M:US, CND)		
C266	1-124-463-00	ELECT	0.1uF	20%	50V
			(H61:E, AUS, EA, MY, SP, JE/H61M:US, CND)		
C267	1-161-379-00	CERAMIC	0.01uF	20%	25V
			(H61:E, AUS, EA, MY, SP, JE/H61M:US, CND)		
C268	1-124-465-00	ELECT	0.47uF	20%	50V
			(H61:E, AUS, EA, MY, SP, JE/H61M:US, CND)		

< CONNECTOR >

* CN251 1-568-848-11 SOCKET, CONNECTOR 5P

Ref. No.	Part No.	Description	Remark
* CN261	1-568-848-11	SOCKET, CONNECTOR 5P	(H61:E, AUS, EA, MY, SP, JE/H61M:US, CND)
		< IC >	
IC250	8-759-634-51	IC M5218AP	(H61:E, AUS, EA, MY, SP, JE/H61M:US, CND)
		< JACK >	
J251	1-750-032-11	JACK (DIA. 3.5) (HEADPHONES)	
J261	1-750-032-11	JACK (DIA. 3.5) (MIX MIC)	(H61:E, AUS, EA, MY, SP, JE/H61M:US, CND)
		< RESISTOR >	
R250	1-249-414-11	CARBON 560 5% 1/4W	
R251	1-249-414-11	CARBON 560 5% 1/4W	
R252	1-249-417-11	CARBON 1K 5% 1/4W	
R260	1-249-429-11	CARBON 10K 5% 1/4W	(H61:E, AUS, EA, MY, SP, JE/H61M:US, CND)
R261	1-249-411-11	CARBON 330 5% 1/4W	(H61:E, AUS, EA, MY, SP, JE/H61M:US, CND)
R262	1-249-416-11	CARBON 820 5% 1/4W F	(H61:E, AUS, EA, MY, SP, JE/H61M:US, CND)
R263	1-247-887-00	CARBON 220K 5% 1/4W	(H61:E, AUS, EA, MY, SP, JE/H61M:US, CND)
R264	1-249-441-11	CARBON 100K 5% 1/4W	(H61:E, AUS, EA, MY, SP, JE/H61M:US, CND)
		< CONNECTOR >	
* 1-638-308-11	LOADING BOARD		

		< SWITCH >	
CN201	1-580-918-11	HOUSING, CONNECTOR 5P	
		< SWITCH >	
S291	1-571-924-11	SWITCH, LEAF (LOAD IN)	
S292	1-571-924-11	SWITCH, LEAF (LOAD OUT)	

*	A-4356-569-A	MAIN BOARD, COMPLETE	(H61:AEP)
*	A-4356-570-A	MAIN BOARD, COMPLETE	(H61:G, IT)
*	A-4356-571-A	MAIN BOARD, COMPLETE	(H61:EE)
*	A-4356-572-A	MAIN BOARD, COMPLETE	(H61:E, AUS, EA, MY, SP)
*	A-4360-497-A	MAIN BOARD, COMPLETE	(H61:JE)
*	A-4356-561-A	MAIN BOARD, COMPLETE	(H61M:US, CND)
*	A-4356-559-A	MAIN BOARD, COMPLETE	(H61M:AEP, UK)

*	4-925-530-01	PLATE, GROUND	(H61)

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark				
C609	1-124-927-11	ELECT	4.7uF	20%	100V	(H61:AEP, G, IT, EE/H61M:AEP, UK)	C642	1-164-159-11	CERAMIC	0.1uF	50V		
C610	1-124-927-11	ELECT	4.7uF	20%	100V	(H61:AEP, G, IT, EE/H61M:AEP, UK)	C701	1-124-907-11	ELECT	10uF	20%	50V	
C611	1-161-374-11	CERAMIC	0.0015uF	20%	50V	(H61:AEP, G, IT, EE/H61M:AEP, UK)	C702	1-126-157-11	ELECT	10uF	20%	16V	
C612	1-161-374-11	CERAMIC	0.0015uF	20%	50V	(H61:AEP, G, IT, EE/H61M:AEP, UK)	C703	1-124-907-11	ELECT	10uF	20%	50V	
C613	1-130-480-00	MYLAR	0.0056uF	5%	50V	(H61:AEP, G, IT, EE/H61M:AEP, UK)	C704	1-126-157-11	ELECT	10uF	20%	16V	
C614	1-130-480-00	MYLAR	0.0056uF	5%	50V	(H61:AEP, G, IT, EE/H61M:AEP, UK)	C705	1-136-164-00	FILM	0.082uF	5%	50V	
C615	1-124-925-11	ELECT	2.2uF	20%	100V	(H61:AEP, G, IT, EE/H61M:AEP, UK)	C706	1-136-164-00	FILM	0.082uF	5%	50V	
C616	1-124-925-11	ELECT	2.2uF	20%	100V	(H61:AEP, G, IT, EE/H61M:AEP, UK)	C707	1-136-167-00	FILM	0.15uF	5%	50V	
C617	1-124-477-11	ELECT	47uF	20%	25V	(H61:AEP, G, IT, EE/H61M:AEP, UK)	C708	1-136-167-00	FILM	0.15uF	5%	50V	
C618	1-124-477-11	ELECT	47uF	20%	25V	(H61:AEP, G, IT, EE/H61M:AEP, UK)	C709	1-162-292-31	CERAMIC	680PF	10%	50V	
C619	1-164-159-11	CERAMIC	0.1uF	50V			C710	1-162-292-31	CERAMIC	680PF	10%	50V	
C620	1-164-159-11	CERAMIC	0.1uF	50V			C711	1-130-472-00	MYLAR	0.0012uF	5%	50V	
C621	1-164-159-11	CERAMIC	0.1uF	50V	(H61:E, AUS, EA, MY, SP, JE)		C712	1-130-472-00	MYLAR	0.0012uF	5%	50V	
C622	1-164-159-11	CERAMIC	0.1uF	50V	(H61:E, AUS, EA, MY, SP, JE)		C713	1-161-374-11	CERAMIC	0.0015uF	20%	50V	
C625	1-162-290-31	CERAMIC	470PF	10%	50V	(H61M:US, CND)		C714	1-161-374-11	CERAMIC	0.0015uF	20%	50V
C625	1-162-294-31	CERAMIC	0.001uF	10%	50V	(H61:E, AUS, EA, MY, SP, JE)		C715	1-130-476-00	MYLAR	0.0027uF	5%	50V
C626	1-162-290-31	CERAMIC	470PF	10%	50V	(H61M:US, CND)		C716	1-130-476-00	MYLAR	0.0027uF	5%	50V
C626	1-162-294-31	CERAMIC	0.001uF	10%	50V	(H61:E, AUS, EA, MY, SP, JE)		C717	1-130-478-00	MYLAR	0.0039uF	5%	50V
C627	1-164-159-11	CERAMIC	0.1uF	50V	(H61M:US, CND)		C718	1-130-478-00	MYLAR	0.0039uF	5%	50V	
C627	1-161-494-00	CERAMIC	0.022uF	25V			C719	1-161-329-00	CERAMIC	0.0068uF	30%	16V	
C628	1-164-159-11	CERAMIC	0.1uF	50V			C720	1-161-329-00	CERAMIC	0.0068uF	30%	16V	
C628	1-161-494-00	CERAMIC	0.022uF	25V	(H61M:US, CND)		C721	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C629	1-162-282-31	CERAMIC	100PF	10%	50V		C722	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C630	1-162-282-31	CERAMIC	100PF	10%	50V		C723	1-130-486-00	MYLAR	0.018uF	10%	50V	
C631	1-162-207-31	CERAMIC	22PF	5%	50V		C724	1-130-486-00	MYLAR	0.018uF	10%	50V	
C632	1-162-207-31	CERAMIC	22PF	5%	50V		C725	1-161-494-00	CERAMIC	0.022uF		25V	
C633	1-164-159-11	CERAMIC	0.1uF	50V			C726	1-161-494-00	CERAMIC	0.022uF		25V	
C634	1-164-159-11	CERAMIC	0.1uF	50V			C727	1-130-491-00	MYLAR	0.047uF	5%	50V	
C635	1-161-379-00	CERAMIC	0.01uF	20%	25V	(H61:E, AUS, EA, MY, SP, JE)		C728	1-130-491-00	MYLAR	0.047uF	5%	50V
C636	1-161-379-00	CERAMIC	0.01uF	20%	25V	(H61:E, AUS, EA, MY, SP, JE)		C729	1-136-162-00	FILM	0.056uF	5%	50V
C637	1-124-477-11	ELECT	47uF	20%	25V			C730	1-136-162-00	FILM	0.056uF	5%	50V
C638	1-124-477-11	ELECT	47uF	20%	25V			C731	1-164-159-11	CERAMIC	0.1uF	50V	
C639	1-162-282-31	CERAMIC	100PF	10%	50V			C732	1-164-159-11	CERAMIC	0.1uF	50V	
C640	1-162-282-31	CERAMIC	100PF	10%	50V			C733	1-136-167-00	FILM	0.15uF	5%	50V
C641	1-164-159-11	CERAMIC	0.1uF	50V				C734	1-136-167-00	FILM	0.15uF	5%	50V
								C735	1-136-169-00	FILM	0.22uF	5%	50V
								C736	1-136-169-00	FILM	0.22uF	5%	50V
								C737	1-162-282-31	CERAMIC	100PF	10%	50V
								C738	1-162-282-31	CERAMIC	100PF	10%	50V
								C739	1-124-907-11	ELECT	10uF	20%	50V
								C740	1-126-157-11	ELECT	10uF	20%	16V
								C741	1-162-282-31	CERAMIC	100PF	10%	50V
								C742	1-162-282-31	CERAMIC	100PF	10%	50V
								C743	1-162-282-31	CERAMIC	100PF	10%	50V
								C744	1-162-282-31	CERAMIC	100PF	10%	50V
								C745	1-124-907-11	ELECT	10uF	20%	50V
								C746	1-126-157-11	ELECT	10uF	20%	16V
								C747	1-162-282-31	CERAMIC	100PF	10%	50V
								C748	1-162-282-31	CERAMIC	100PF	10%	50V

MAIN

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark
C749	1-124-903-11	ELECT	1uF	20%	50V	* CN611	1-573-048-11	PLUG, CONNECTOR 11P	
C750	1-126-301-11	ELECT	1uF	20%	50V	* CN612	1-569-155-11	PLUG, CONNECTOR 10P	
C751	1-164-159-11	CERAMIC	0.1uF		50V				< DIODE >
C752	1-164-159-11	CERAMIC	0.1uF		50V	D1	8-719-976-30	DIODE KV1560N (H61:E, AUS, EA, MY, SP, JE)	
C753	1-164-159-11	CERAMIC	0.1uF		50V	D2	8-719-987-63	DIODE 1N4148M	
C755	1-124-443-00	ELECT	100uF	20%	10V	D581	8-719-987-63	DIODE 1N4148M (H61:E, AUS, EA, MY, SP, JE)	
C758	1-124-443-00	ELECT	100uF	20%	10V	D582	8-719-987-63	DIODE 1N4148M (H61:E, AUS, EA, MY, SP, JE)	
C759	1-124-443-00	ELECT	100uF	20%	10V	D583	8-719-987-63	DIODE 1N4148M (H61:E, AUS, EA, MY, SP, JE)	
C760	1-124-443-00	ELECT	100uF	20%	10V	D584	8-719-987-63	DIODE 1N4148M	
C761	1-124-903-11	ELECT	1uF	20%	50V	D586	8-719-987-63	DIODE 1N4148M	
C762	1-124-903-11	ELECT	1uF	20%	50V	D587	8-719-987-63	DIODE 1N4148M	
C763	1-124-927-11	ELECT	4.7uF	20%	100V	D588	8-719-987-63	DIODE 1N4148M	
C764	1-124-927-11	ELECT	4.7uF	20%	100V	D601	8-719-987-63	DIODE 1N4148M	
C766	1-124-907-11	ELECT	10uF	20%	50V	D603	8-719-987-63	DIODE 1N4148M	
			(H61:AEP, EE, E, AUS, EA, MY, SP, JE/H61M)			D604	8-719-987-63	DIODE 1N4148M	
C767	1-124-903-11	ELECT	1uF	20%	50V	D605	8-719-987-63	DIODE 1N4148M	
C768	1-124-473-11	ELECT	1000uF	20%	10V				< FRONTEND >
C769	1-124-903-11	ELECT	1uF	20%	50V	FE1	1-465-007-11	FRONT END (FM) (4 GANG) (H61:G, IT)	
C771	1-162-207-31	CERAMIC	22PF	5%	50V	FE1	1-465-396-11	FRONT END (3 GANG) (H61:EE)	
C772	1-162-207-31	CERAMIC	22PF	5%	50V	FE1	1-465-673-11	FRONT END (2 BAND) (H61:AEP, E, AUS, EA, MY, SP, JE/H61M)	
C775	1-161-379-00	CERAMIC	0.01uF	20%	25V	FE2	1-236-463-11	ENCAPSULATED COMPONENT (H61:AEP, EE/H61M:AEP, UK)	
C776	1-161-379-00	CERAMIC	0.01uF	20%	25V	FE3	1-239-261-12	ENCAPSULATED COMPONENT (H61:AEP, EE/H61M:AEP, UK)	
C777	1-164-159-11	CERAMIC	0.1uF		50V	FE3	1-239-262-11	ENCAPSULATED COMPONENT (H61:E, AUS, EA, MY, SP, JE)	
			(H61)			FE3	1-239-260-11	ENCAPSULATED COMPONENT (H61:G, IT/H61M:US, CND)	
									< FILTER >
CF1	1-527-968-11	FILTER, CERAMIC				FL1	1-236-465-11	ENCAPSULATED COMPONENT (H61:G, IT)	
CF2	1-527-968-11	FILTER, CERAMIC			(H61:G, IT)	FL2	1-239-597-11	FILTER, LOW PASS	
CF3	1-527-968-11	FILTER, CERAMIC				FL3	1-239-597-11	FILTER, LOW PASS	
									< CONNECTOR >
									< IC >
CN601	1-537-238-11	TERMINAL BOARD				IC1	8-759-820-91	IC LC7218	
* CN602	1-564-510-11	PLUG, CONNECTOR 7P				IC2	8-759-090-40	IC LA1831	
* CN603	1-568-454-11	PIN, CONNECTOR (PC BOARD) 9P				IC581	8-759-166-03	IC M50253PK	
* CN604	1-568-454-11	PIN, CONNECTOR (PC BOARD) 9P				IC601	8-759-634-51	IC M5218AP (H61:AEP, G, IT, EE/H61M:AEP, UK)	
* CN605	1-573-085-11	CONNECTOR, FPC (NON ZIF) 19P				IC602	8-759-000-48	IC MC14052BCP	
* CN606	1-568-824-11	SOCKET, CONNECTOR 5P (H61M:US, CND)				IC603	8-759-000-48	IC MC14052BCP (H61:E, AUS, EA, MY, SP, JE)	
CN606	1-695-328-11	PIN, CONNECTOR (PC BOARD) 5P				IC604	8-759-000-48	IC MC14052BCP (H61:E, AUS, EA, MY, SP, JE)	
			(H61:E, AUS, EA, MY, SP, JE)			IC605	8-759-634-51	IC M5218AP	
* CN607	1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P				IC606	8-759-634-51	IC M5218AP	
* CN608	1-564-511-11	PLUG, CONNECTOR 8P				IC607	8-759-155-51	IC CXA1492BQ	
* CN609	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P				IC609	8-759-821-93	IC LA5601	
CN610	1-695-334-11	PIN, CONNECTOR (PC BOARD) 11P							

Ref. No.	Part No.	Description	Remark
< IFT >			
< JACK >			
IFT1	1-404-853-11	TRANSFORMER, IF (CERAMIC FILTER)	
< COIL >			
L1	1-408-425-00	INDUCTOR 220uH (H61:AEP, EE/H61M:AEP, UK)	
L3	1-408-399-00	INDUCTOR 1.5uH	
* L600	1-410-858-11	INDUCTOR 0uH (H61:G, IT)	
* L601	1-410-858-11	INDUCTOR 0uH (H61:G, IT)	
< TRANSISTOR >			
Q1	8-729-620-19	TRANSISTOR 2SC2724-CD	
Q2	8-729-620-19	TRANSISTOR 2SC2724-CD (H61:G, IT)	
Q3	8-729-900-81	TRANSISTOR DTA114ES	
Q4	8-729-119-76	TRANSISTOR 2SA1175-HFE (H61:AEP, EE, E, AUS, EA, MY, SP, JE/H61M:AEP, UK)	
Q5	8-729-900-80	TRANSISTOR DTC114ES (H61:AEP, EE, E, AUS, EA, MY, SP, JE/H61M:AEP, UK)	
Q6	8-729-900-80	TRANSISTOR DTC114ES (H61:AEP, EE, E, AUS, EA, MY, SP, JE/H61M:AEP, UK)	
Q7	8-729-900-80	TRANSISTOR DTC114ES (H61:AEP, EE, E, AUS, EA, MY, SP, JE/H61M:AEP, UK)	
Q8	8-729-119-76	TRANSISTOR 2SA1175-HFE (H61:AEP, EE, E, AUS, EA, MY, SP, JE/H61M:AEP, UK)	
Q9	8-729-900-80	TRANSISTOR DTC114ES (H61:AEP, EE, E, AUS, EA, MY, SP, JE/H61M:AEP, UK)	
Q10	8-729-201-83	TRANSISTOR 2SC3112-A	
Q11	8-729-202-67	TRANSISTOR 2SK246-GR3	
Q12	8-729-201-83	TRANSISTOR 2SC3112-A (H61:AEP, EE/H61M:AEP, UK)	
Q13	8-729-202-67	TRANSISTOR 2SK246-GR3 (H61:AEP, EE/H61M:AEP, UK)	
Q14	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q15	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q581	8-729-900-89	TRANSISTOR DTC114ES	
Q582	8-729-900-80	TRANSISTOR DTC114ES	
Q583	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q601	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q602	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q603	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q604	8-729-900-63	TRANSISTOR DTA124ES	
Q751	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q752	8-729-620-05	TRANSISTOR 2SC2603-EF	

Ref. No.	Part No.	Description	Remark
< RESISTOR >			
R1	1-249-411-11	CARBON 330 5% 1/4W	
R2	1-249-411-11	CARBON 330 5% 1/4W	
R3	1-247-891-00	CARBON 330K 5% 1/4W	
R4	1-249-411-11	CARBON 330 5% 1/4W	
R5	1-247-891-00	CARBON 330K 5% 1/4W (H61:G, IT)	
R6	1-249-411-11	CARBON 330 5% 1/4W (H61:G, IT)	
R7	1-249-405-11	CARBON 100 5% 1/4W	
R8	1-249-433-11	CARBON 22K 5% 1/4W (H61:AEP, EE, E, AUS, EA, MY, SP, JE/H61M:AEP, UK)	
R9	1-247-903-00	CARBON 1M 5% 1/4W (H61:AEP, EE, E, AUS, EA, MY, SP, JE/H61M:AEP, UK)	
R10	1-247-903-00	CARBON 1M 5% 1/4W (H61:AEP, EE/H61M:AEP, UK)	
R11	1-249-425-11	CARBON 4.7K 5% 1/4W (H61:AEP, EE, E, AUS, EA, MY, SP, JE/H61M:AEP, UK)	
R12	1-249-441-11	CARBON 100K 5% 1/4W	
R13	1-249-437-11	CARBON 47K 5% 1/4W	
R16	1-249-425-11	CARBON 4.7K 5% 1/4W (H61:AEP, EE, E, AUS, EA, MY, SP, JE/H61M:AEP, UK)	
R17	1-249-425-11	CARBON 4.7K 5% 1/4W (H61:AEP, EE, E, AUS, EA, MY, SP, JE/H61M:AEP, UK)	
R18	1-249-429-11	CARBON 10K 5% 1/4W (H61:AEP, EE, E, AUS, EA, MY, SP, JE/H61M:AEP, UK)	
R19	1-249-429-11	CARBON 10K 5% 1/4W (H61:AEP, EE, E, AUS, EA, MY, SP, JE/H61M:AEP, UK)	
R20	1-249-429-11	CARBON 10K 5% 1/4W (H61:AEP, EE, E, AUS, EA, MY, SP, JE/H61M:AEP, UK)	
R21	1-249-405-11	CARBON 100 5% 1/4W	
R22	1-249-425-11	CARBON 4.7K 5% 1/4W	
R23	1-249-425-11	CARBON 4.7K 5% 1/4W	
R24	1-249-421-11	CARBON 2.2K 5% 1/4W	
R25	1-249-425-11	CARBON 4.7K 5% 1/4W	
R26	1-249-414-11	CARBON 560 5% 1/4W	
R27	1-249-417-11	CARBON 1K 5% 1/4W	
R28	1-249-410-11	CARBON 270 5% 1/4W	
R29	1-249-423-11	CARBON 3.3K 5% 1/4W	
R30	1-249-425-11	CARBON 4.7K 5% 1/4W (H61:AEP, EE/H61M:AEP, UK)	
R31	1-249-425-11	CARBON 4.7K 5% 1/4W (H61:AEP, EE/H61M:AEP, UK)	
R32	1-249-421-11	CARBON 2.2K 5% 1/4W (H61:AEP, EE/H61M:AEP, UK)	
R33	1-249-433-11	CARBON 22K 5% 1/4W (H61:AEP, EE/H61M:AEP, UK)	
R34	1-249-414-11	CARBON 560 5% 1/4W (H61:AEP, EE/H61M:AEP, UK)	
R35	1-249-417-11	CARBON 1K 5% 1/4W (H61:AEP, EE/H61M:AEP, UK)	
R36	1-249-410-11	CARBON 270 5% 1/4W (H61:AEP, EE/H61M:AEP, UK)	
R37	1-249-423-11	CARBON 3.3K 5% 1/4W (H61:AEP, EE/H61M:AEP, UK)	
R38	1-249-401-11	CARBON 47 5% 1/4W	

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R39	1-249-405-11	CARBON	100 5% 1/4W	R604	1-249-417-11	CARBON	1K 5% 1/4W (H61:AEP, G, IT, EE/H61M:AEP, UK)
R40	1-249-429-11	CARBON	10K 5% 1/4W	R604	1-249-429-11	CARBON	10K 5% 1/4W (H61:E, AUS, EA, MY, SP, JE/H61M:US, CND)
R41	1-249-417-11	CARBON	1K 5% 1/4W	R605	1-249-438-11	CARBON	56K 5% 1/4W (H61:AEP, G, IT, EE/H61M:AEP, UK)
R42	1-249-417-11	CARBON	1K 5% 1/4W	R606	1-249-438-11	CARBON	56K 5% 1/4W (H61:AEP, G, IT, EE/H61M:AEP, UK)
R43	1-249-417-11	CARBON	1K 5% 1/4W	R607	1-249-417-11	CARBON	1K 5% 1/4W (H61:AEP, G, IT, EE/H61M:AEP, UK)
R44	1-249-417-11	CARBON	1K 5% 1/4W	R608	1-249-417-11	CARBON	1K 5% 1/4W (H61:AEP, G, IT, EE/H61M:AEP, UK)
R45	1-249-417-11	CARBON	1K 5% 1/4W	R609	1-249-437-11	CARBON	47K 5% 1/4W (H61:AEP, G, IT, EE/H61M:AEP, UK)
R46	1-249-425-11	CARBON	4.7K 5% 1/4W	R610	1-249-437-11	CARBON	47K 5% 1/4W (H61:AEP, G, IT, EE/H61M:AEP, UK)
R47	1-249-417-11	CARBON	1K 5% 1/4W	R611	1-247-897-11	CARBON	560K 5% 1/4W (H61:AEP, G, IT, EE/H61M:AEP, UK)
R48	1-249-399-11	CARBON	33 5% 1/4W	R612	1-247-897-11	CARBON	560K 5% 1/4W (H61:AEP, G, IT, EE/H61M:AEP, UK)
R49	1-249-395-11	CARBON	15 5% 1/4W (H61:E, AUS, EA, MY, SP, JE)	R613	1-249-417-11	CARBON	1K 5% 1/4W (H61:AEP, G, IT, EE/H61M:AEP, UK)
R50	1-249-425-11	CARBON	4.7K 5% 1/4W	R614	1-249-417-11	CARBON	1K 5% 1/4W (H61:AEP, G, IT, EE/H61M:AEP, UK)
R51	1-249-412-11	CARBON	390 5% 1/4W	R615	1-249-405-11	CARBON	100 5% 1/4W (H61:AEP, G, IT, EE/H61M:AEP, UK)
R52	1-249-429-11	CARBON	10K 5% 1/4W	R616	1-249-405-11	CARBON	100 5% 1/4W (H61:AEP, G, IT, EE/H61M:AEP, UK)
R53	1-247-842-11	CARBON	3K 5% 1/4W	R617	1-249-437-11	CARBON	47K 5% 1/4W (H61:AEP, G, IT, EE/H61M:AEP, UK)
R54	1-249-429-11	CARBON	10K 5% 1/4W	R618	1-249-437-11	CARBON	47K 5% 1/4W (H61:AEP, G, IT, EE/H61M:AEP, UK)
R55	1-249-429-11	CARBON	10K 5% 1/4W	R619	1-249-429-11	CARBON	10K 5% 1/4W (H61:AEP, G, IT, EE/H61M:AEP, UK)
R57	1-249-430-11	CARBON	12K 5% 1/4W (H61:AEP, EE, E, AUS, EA, MY, SP, JE/H61M)	R620	1-249-429-11	CARBON	10K 5% 1/4W (H61:AEP, G, IT, EE/H61M:AEP, UK)
R58	1-249-430-11	CARBON	12K 5% 1/4W (H61:G, IT)	R621	1-249-429-11	CARBON	10K 5% 1/4W (H61:E, AUS, EA, MY, SP, JE)
R59	1-249-425-11	CARBON	4.7K 5% 1/4W	R622	1-249-429-11	CARBON	10K 5% 1/4W (H61:E, AUS, EA, MY, SP, JE)
R60	1-249-425-11	CARBON	4.7K 5% 1/4W	R627	1-249-437-11	CARBON	47K 5% 1/4W (H61:E, AUS, EA, MY, SP, JE)
R61	1-247-891-00	CARBON	330K 5% 1/4W	R628	1-249-437-11	CARBON	47K 5% 1/4W (H61:E, AUS, EA, MY, SP, JE)
R62	1-247-891-00	CARBON	330K 5% 1/4W	R629	1-249-437-11	CARBON	47K 5% 1/4W (H61:AEP, G, IT, EE/H61M:AEP, UK)
R63	1-249-412-11	CARBON	390 5% 1/4W	R630	1-249-437-11	CARBON	47K 5% 1/4W (H61:AEP, G, IT, EE/H61M:AEP, UK)
R64	1-249-412-11	CARBON	390 5% 1/4W	R631	1-249-437-11	CARBON	47K 5% 1/4W (H61:E, AUS, EA, MY, SP, JE/H61M:US, CND)
R65	1-249-421-11	CARBON	2.2K 5% 1/4W	R632	1-249-437-11	CARBON	47K 5% 1/4W (H61:E, AUS, EA, MY, SP, JE/H61M:US, CND)
R66	1-249-421-11	CARBON	2.2K 5% 1/4W	R633	1-247-864-11	CARBON	24K 5% 1/4W (H61:E, AUS, EA, MY, SP, JE)
R67	1-249-409-11	CARBON	220 5% 1/4W	R634	1-247-864-11	CARBON	24K 5% 1/4W (H61:E, AUS, EA, MY, SP, JE)
R68	1-249-405-11	CARBON	100 5% 1/4W	R635	1-249-437-11	CARBON	47K 5% 1/4W (H61:E, AUS, EA, MY, SP, JE)
R69	1-249-425-11	CARBON	4.7K 5% 1/4W	R636	1-249-437-11	CARBON	47K 5% 1/4W (H61:E, AUS, EA, MY, SP, JE)
R70	1-249-425-11	CARBON	4.7K 5% 1/4W	R637	1-249-429-11	CARBON	10K 5% 1/4W (H61:E, AUS, EA, MY, SP, JE)
R74	1-249-429-11	CARBON	10K 5% 1/4W	R639	1-249-438-11	CARBON	56K 5% 1/4W (H61:AEP, G, IT, EE/H61M:AEP, UK)
R80	1-249-429-11	CARBON	10K 5% 1/4W (H61:AEP, EE, E, AUS, EA, MY, SP, JE/H61M:AEP, UK)	R640	1-249-438-11	CARBON	56K 5% 1/4W (H61:AEP, G, IT, EE/H61M:AEP, UK)
R81	1-249-429-11	CARBON	10K 5% 1/4W (H61:AEP, EE, E, AUS, EA, MY, SP, JE/H61M:AEP, UK)	R641	1-249-435-11	CARBON	33K 5% 1/4W (H61:AEP, G, IT, EE/H61M:AEP, UK)
R90	1-247-839-00	CARBON	2.2K (H61:AEP, EE, E, AUS, EA, JE)	R642	1-249-435-11	CARBON	33K 5% 1/4W (H61:AEP, G, IT, EE/H61M:AEP, UK)
R581	1-249-425-11	CARBON	4.7K 5% 1/4W	R643	1-249-441-11	CARBON	100K 5% 1/4W (H61:E, AUS, EA, MY, SP, JE)
R582	1-249-425-11	CARBON	4.7K 5% 1/4W				
R583	1-249-429-11	CARBON	10K 5% 1/4W				
R584	1-249-429-11	CARBON	10K 5% 1/4W				
R585	1-249-429-11	CARBON	10K 5% 1/4W				
R601	1-249-417-11	CARBON	1K 5% 1/4W				
R602	1-249-417-11	CARBON	1K 5% 1/4W				
R603	1-249-417-11	CARBON	1K 5% 1/4W (H61:AEP, G, IT, EE/H61M:AEP, UK)				
R603	1-249-429-11	CARBON	10K 5% 1/4W (H61:E, AUS, EA, MY, SP, JE/H61M:US, CND)				

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R644	1-249-441-11	CARBON	100K 5% 1/4W	R787	1-249-425-11	CARBON	4.7K 5% 1/4W
R645	1-249-435-11	CARBON	33K 5% 1/4W	R788	1-249-425-11	CARBON	4.7K 5% 1/4W
R646	1-249-435-11	CARBON	33K 5% 1/4W	R789	1-247-895-00	CARBON	470K 5% 1/4W
R647	1-249-438-11	CARBON	56K 5% 1/4W	R790	1-247-895-00	CARBON	470K 5% 1/4W
R648	1-249-438-11	CARBON	56K 5% 1/4W	R793	1-249-441-11	CARBON	100K 5% 1/4W (H61:AEP, G, IT, EE/H61M:AEP, UK)
R649	1-249-429-11	CARBON	10K 5% 1/4W	R794	1-249-441-11	CARBON	100K 5% 1/4W (H61:AEP, G, IT, EE/H61M:AEP, UK)
R650	1-249-429-11	CARBON	10K 5% 1/4W				< VARIABLE RESISTOR >
R652	1-249-429-11	CARBON	10K 5% 1/4W	RV1	1-238-601-11	RES, ADJ, CARBON 22K	
R653	1-249-441-11	CARBON	100K 5% 1/4W				< RELAY >
R701	1-249-435-11	CARBON	33K 5% 1/4W	RY601	1-515-920-11	RELAY (24V)	
R702	1-249-435-11	CARBON	33K 5% 1/4W				< TRANSFORMER >
R703	1-249-429-11	CARBON	10K 5% 1/4W	T1	1-402-424-11	COIL (ANT, SW3) (H61:E, AUS, EA, MY, SP, JE)	
R704	1-249-429-11	CARBON	10K 5% 1/4W	T2	1-402-960-11	COIL (OSC SW3) (H61:E, AUS, EA, MY, SP, JE)	
R705	1-247-903-00	CARBON	1M 5% 1/4W				< TERMINAL >
R706	1-247-903-00	CARBON	1M 5% 1/4W	TB1	1-537-238-21	TERMINAL BOARD (H61:E, AUS, EA, MY, SP, JE/H61M:US, CND)	
R707	1-247-903-00	CARBON	1M 5% 1/4W	TB1	1-537-488-11	TERMINAL BOARD (ANT) (H61:AEP, G, IT, EE/H61M:AEP, UK)	
R708	1-247-903-00	CARBON	1M 5% 1/4W				< VIBRATOR >
R709	1-247-903-00	CARBON	1M 5% 1/4W	X1	1-577-126-21	VIBRATOR, CRYSTAL (7.2MHz)	
R710	1-247-903-00	CARBON	1M 5% 1/4W	X2	1-577-075-11	OSCILLATOR, CERAMIC (456kHz)	
R711	1-247-903-00	CARBON	1M 5% 1/4W	X3	1-579-777-11	DISCRIMINATOR, CERAMIC (10.7MHz)	
R712	1-247-903-00	CARBON	1M 5% 1/4W				*****
R713	1-247-903-00	CARBON	1M 5% 1/4W	* A-2006-399-A	MD(AX) BOARD, COMPLETE		*****
R714	1-247-903-00	CARBON	1M 5% 1/4W				
R715	1-247-903-00	CARBON	1M 5% 1/4W				
R716	1-247-903-00	CARBON	1M 5% 1/4W				
R717	1-247-903-00	CARBON	1M 5% 1/4W				
R718	1-247-903-00	CARBON	1M 5% 1/4W				
R719	1-247-903-00	CARBON	1M 5% 1/4W				
R720	1-247-903-00	CARBON	1M 5% 1/4W				
R721	1-249-429-11	CARBON	10K 5% 1/4W				
R722	1-249-429-11	CARBON	10K 5% 1/4W				
R723	1-249-435-11	CARBON	33K 5% 1/4W				
R724	1-249-435-11	CARBON	33K 5% 1/4W				
R725	1-249-437-11	CARBON	47K 5% 1/4W				
R726	1-249-437-11	CARBON	47K 5% 1/4W				< CAPACITOR >
R727	1-249-429-11	CARBON	10K 5% 1/4W	C11	1-163-131-00	CERAMIC CHIP	390PF 5% 50V
R728	1-249-429-11	CARBON	10K 5% 1/4W	C12	1-136-157-00	FILM	0.022uF 5% 50V
R729	1-249-429-11	CARBON	10K 5% 1/4W	C13	1-124-234-00	ELECT	22uF 20% 16V
R730	1-249-417-11	CARBON	1K 5% 1/4W	C18	1-163-117-00	CERAMIC CHIP	100PF 5% 50V
R751	1-249-427-11	CARBON	6.8K 5% 1/4W	C21	1-163-131-00	CERAMIC CHIP	390PF 5% 50V
R752	1-249-427-11	CARBON	6.8K 5% 1/4W	C22	1-136-157-00	FILM	0.022uF 5% 50V
R753	1-249-441-11	CARBON	100K 5% 1/4W	C23	1-124-234-00	ELECT	22uF 20% 16V
R754	1-249-441-11	CARBON	100K 5% 1/4W	C28	1-163-117-00	CERAMIC CHIP	100PF 5% 50V
R780	1-249-417-11	CARBON	1K 5% 1/4W	C31	1-124-234-00	ELECT	22uF 20% 16V
R781	1-249-417-11	CARBON	1K 5% 1/4W	C32	1-124-234-00	ELECT	22uF 20% 16V
▲R782	1-217-637-00	FUSIBLE	1 5% 1/4W F	C72	1-124-499-11	ELECT, NONPOLAR 1uF	20% 50V
R783	1-249-393-11	CARBON	10 5% 1/4W				
R785	1-247-895-00	CARBON	470K 5% 1/4W				
R786	1-247-895-00	CARBON	470K 5% 1/4W				

The components identified by mark ▲ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ▲ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

MD(AX)**MD(BX)**

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark				
< CONNECTOR >											
* CNJ31	1-580-782-11	CONNECTOR, BOARD TO BOARD		C14	1-136-273-00	FILM	75PF 5% 630V				
* CNJ72	1-580-411-11	SOCKET, CONNECTOR 4P		C15	1-164-080-11	CERAMIC	390PF 10% 50V				
* CNP32	1-580-772-11	PIN, CONNECTOR (PC BOARD) 4P		C17	1-163-103-00	CERAMIC CHIP	27PF 5% 50V				
* CNP71	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P		C18	1-163-117-00	CERAMIC CHIP	100PF 5% 50V				
< IC >											
IC31	8-759-106-02	IC uPC4570G2		C21	1-163-131-00	CERAMIC CHIP	390PF 5% 50V				
< JUMPER RESISTOR >											
JW1	1-216-295-00	METAL CHIP	0 5% 1/10W	C22	1-136-157-00	FILM	0.022uF 5% 50V				
JW51	1-216-296-00	METAL CHIP	0 5% 1/8W	C23	1-124-234-00	ELECT	22uF 20% 16V				
JW52	1-216-296-00	METAL CHIP	0 5% 1/8W	C24	1-136-273-00	FILM	75PF 5% 630V				
JW53	1-216-296-00	METAL CHIP	0 5% 1/8W	C25	1-164-080-11	CERAMIC	390PF 10% 50V				
JW54	1-216-296-00	METAL CHIP	0 5% 1/8W	C27	1-163-103-00	CERAMIC CHIP	27PF 5% 50V				
< TRANSISTOR >											
Q71	8-729-602-36	TRANSISTOR 2SA1602		C28	1-163-117-00	CERAMIC CHIP	100PF 5% 50V				
< RESISTOR >											
R11	1-216-099-00	METAL CHIP	120K 5% 1/10W	C31	1-124-234-00	ELECT	22uF 20% 16V				
R12	1-216-025-00	METAL CHIP	100 5% 1/10W	C32	1-124-234-00	ELECT	22uF 20% 16V				
R13	1-216-100-00	METAL GLAZE	130K 5% 1/10W	C33	1-124-234-00	ELECT	22uF 20% 16V				
R14	1-216-067-00	METAL CHIP	5.6K 5% 1/10W	C51	1-163-019-00	CERAMIC CHIP	0.0068uF 10% 50V				
R21	1-216-099-00	METAL CHIP	120K 5% 1/10W	C52	1-163-019-00	CERAMIC CHIP	0.0068uF 10% 50V				
R22	1-216-025-00	METAL CHIP	100 5% 1/10W	C53	1-163-022-00	CERAMIC CHIP	0.012uF 10% 50V				
R23	1-216-100-00	METAL GLAZE	130K 5% 1/10W	C54	1-136-559-11	FILM	0.0047uF 5% 630V				
R24	1-216-067-00	METAL CHIP	5.6K 5% 1/10W	C56	1-164-505-11	CERAMIC CHIP	2.2uF 16V				
R31	1-216-033-00	METAL CHIP	220 5% 1/10W	C57	1-164-346-11	CERAMIC CHIP	1uF 16V				
R32	1-216-033-00	METAL CHIP	220 5% 1/10W	C58	1-163-024-00	CERAMIC CHIP	0.018uF 10% 50V				
R71	1-216-082-00	METAL GLAZE	24K 5% 1/10W	C72	1-124-499-11	ELECT, NONPOLAR	1uF 20% 50V				
R72	1-216-081-00	METAL CHIP	22K 5% 1/10W	< CONNECTOR >							
R73	1-216-089-00	METAL CHIP	47K 5% 1/10W	* CNJ31	1-580-782-11	CONNECTOR, BOARD TO BOARD					
R74	1-216-089-00	METAL CHIP	47K 5% 1/10W	* CNJ33	1-580-782-11	CONNECTOR, BOARD TO BOARD					
< VARIABLE RESISTOR >											
RV11	1-241-627-11	RES, ADJ, CARBON 1K		* CNJ72	1-580-411-11	SOCKET, CONNECTOR 4P					
RV21	1-241-627-11	RES, ADJ, CARBON 1K		* CNP32	1-580-781-11	PIN, CONNECTOR (PC BOARD) 7P					
RV71	1-241-630-11	RES, ADJ, CARBON 10K		* CNP71	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P					
RV72	1-241-630-11	RES, ADJ, CARBON 10K		< DIODE >							

*	A-2006-400-A	MD(BX) BOARD, COMPLETE		D31	8-719-016-74	DIODE 1SS352					
< CAPACITOR >											
C11	1-163-131-00	CERAMIC CHIP	390PF 5% 50V	< JUMPER RESISTOR >							
C12	1-136-157-00	FILM	0.022uF 5% 50V	JW1	1-216-296-00	METAL CHIP	0 5% 1/8W				
C13	1-124-234-00	ELECT	22uF 20% 16V	JW2	1-216-295-00	METAL CHIP	0 5% 1/10W				
				JW3	1-216-295-00	METAL CHIP	0 5% 1/10W				
				JW4	1-216-295-00	METAL CHIP	0 5% 1/10W				
				JW6	1-216-295-00	METAL CHIP	0 5% 1/10W				
				JW7	1-216-295-00	METAL CHIP	0 5% 1/10W				
				JW52	1-216-296-00	METAL CHIP	0 5% 1/8W				
				JW53	1-216-296-00	METAL CHIP	0 5% 1/8W				
				JW54	1-216-296-00	METAL CHIP	0 5% 1/8W				
				JW55	1-216-296-00	METAL CHIP	0 5% 1/8W				
				JW56	1-216-296-00	METAL CHIP	0 5% 1/8W				

Ref. No.	Part No.	Description			Remark	
JW57	1-216-296-00	METAL CHIP	0	5%	1/8W	
JW58	1-216-296-00	METAL CHIP	0	5%	1/8W	
JW59	1-216-296-00	METAL CHIP	0	5%	1/8W	
JW60	1-216-296-00	METAL CHIP	0	5%	1/8W	
JW61	1-216-296-00	METAL CHIP	0	5%	1/8W	
			< COIL >			
L11	1-410-780-11	INDUCTOR	27mH			
L21	1-410-780-11	INDUCTOR	27mH			
			< TRANSISTOR >			
Q51	8-729-808-01	TRANSISTOR	2SD1622-S			
Q52	8-729-808-01	TRANSISTOR	2SD1622-S			
Q53	8-729-808-01	TRANSISTOR	2SD1622-S			
Q71	8-729-602-36	TRANSISTOR	2SA1602			
			< RESISTOR >			
R11	1-216-099-00	METAL CHIP	120K	5%	1/10W	
R12	1-216-025-00	METAL CHIP	100	5%	1/10W	
R13	1-216-100-00	METAL GLAZE	130K	5%	1/10W	
R14	1-216-067-00	METAL CHIP	5.6K	5%	1/10W	
△R15	1-249-430-11	CARBON	12K	5%	1/4W F	
R21	1-216-099-00	METAL CHIP	120K	5%	1/10W	
R22	1-216-025-00	METAL CHIP	100	5%	1/10W	
R23	1-216-100-00	METAL GLAZE	130K	5%	1/10W	
R24	1-216-067-00	METAL CHIP	5.6K	5%	1/10W	
△R25	1-249-430-11	CARBON	12K	5%	1/4W F	
R31	1-216-033-00	METAL CHIP	220	5%	1/10W	
R32	1-216-033-00	METAL CHIP	220	5%	1/10W	
△R41	1-249-393-11	CARBON	10	5%	1/4W F	
△R42	1-249-393-11	CARBON	10	5%	1/4W F	
R51	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R52	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R53	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R54	1-216-309-00	METAL CHIP	5.6	5%	1/10W	
R55	1-216-309-00	METAL CHIP	5.6	5%	1/10W	
R56	1-216-298-00	METAL CHIP	2.2	5%	1/10W	
R71	1-216-082-00	METAL GLAZE	24K	5%	1/10W	
R72	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R73	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R74	1-216-089-00	METAL CHIP	47K	5%	1/10W	
			< VARIABLE RESISTOR >			
RV11	1-241-627-11	RES, ADJ, CARBON 1K				
RV12	1-238-551-11	RES, ADJ, CARBON 220K				
RV21	1-241-627-11	RES, ADJ, CARBON 1K				
RV22	1-238-551-11	RES, ADJ, CARBON 220K				
RV71	1-241-630-11	RES, ADJ, CARBON 10K				

Ref. No.	Part No.	Description			Remark	
RV72	1-241-630-11	RES, ADJ, CARBON 10K				
			< RELAY >			
RY31	1-515-913-11	RELAY				
			< TRANSFORMER >			
T51	1-406-419-11	COIL, BIAS OSCILLATION				
*	A-4356-568-A	POWER AMP BOARD, COMPLETE (H61:AEP, EE, AUS, EA, MY, SP, JE/H61M)				
*	A-4356-574-A	POWER AMP BOARD, COMPLETE (H61:G, IT)				
*	A-4356-577-A	POWER AMP BOARD, COMPLETE (H61:E)				
			< CAPACITOR >			
C800	1-124-903-11	ELECT	1uF	20%	50V	
C801	1-124-903-11	ELECT	1uF	20%	50V	
C802	1-162-290-31	CERAMIC	470PF	10%	50V	
C803	1-162-290-31	CERAMIC	470PF	10%	50V	
C804	1-162-282-31	CERAMIC	100PF	10%	50V	
C805	1-162-282-31	CERAMIC	100PF	10%	50V	
C806	1-124-910-11	ELECT	47uF	20%	50V	
C807	1-124-910-11	ELECT	47uF	20%	50V	
C808	1-124-910-11	ELECT	47uF	20%	50V	
C809	1-124-910-11	ELECT	47uF	20%	50V	
C810	1-164-159-11	CERAMIC	0.1uF		50V	
C811	1-164-159-11	CERAMIC	0.1uF		50V	
C812	1-164-159-11	CERAMIC	0.1uF		50V	
C813	1-164-159-11	CERAMIC	0.1uF		50V	
C821	1-136-161-00	FILM	0.047uF	5%	50V	
C822	1-124-917-11	ELECT	33uF	20%	63V	
C823	1-124-917-11	ELECT	33uF	20%	63V	
C851	1-124-907-11	ELECT	10uF	20%	50V	
C852	1-124-925-11	ELECT	2.2uF	20%	100V	
C853	1-124-907-11	ELECT	10uF	20%	50V	
C854	1-126-176-11	ELECT	220uF	20%	10V	
C901	1-126-224-11	ELECT	4700uF	20%	42V	
C902	1-126-224-11	ELECT	4700uF	20%	42V	
C903	1-164-159-11	CERAMIC	0.1uF		50V	
C904	1-164-159-11	CERAMIC	0.1uF		50V	
C905	1-124-902-00	ELECT	0.47uF	20%	50V	
C906	1-128-547-51	ELECT	6800uF	20%	16V	
C907	1-124-898-11	ELECT	4700uF	20%	16V	
C908	1-124-925-11	ELECT	2.2uF	20%	100V	
C909	1-124-925-11	ELECT	2.2uF	20%	100V	
C910	1-124-927-11	ELECT	4.7uF	20%	100V	
C911	1-124-925-11	ELECT	2.2uF	20%	100V	
C912	1-124-472-11	ELECT	470uF	20%	10V	

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POWER AMP

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
C913	1-124-472-11	ELECT	470uF	20%	10V	Q909	8-729-900-80	TRANSISTOR	DTC114ES		
C914	1-124-907-11	ELECT	10uF	20%	50V	Q910	8-729-620-05	TRANSISTOR	2SC2603-EF		
C915	1-124-477-11	ELECT	47uF	20%	25V	Q911	8-729-119-76	TRANSISTOR	2SA1175-HFE		
C916	1-124-907-11	ELECT	10uF	20%	50V	< RESISTOR >					
C917	1-124-477-11	ELECT	47uF	20%	25V	△R677	1-212-996-00	FUSIBLE	390	5%	1/2W F
C918	1-161-379-00	CERAMIC	0.01uF	20%	25V	R800	1-249-438-11	CARBON	56K	5%	1/4W
C919	1-164-097-11	CERAMIC	0.022uF		50V	R801	1-249-438-11	CARBON	56K	5%	1/4W
C920	1-162-294-31	CERAMIC	0.001uF	10%	50V	R802	1-249-414-11	CARBON	560	5%	1/4W
C921	1-124-925-11	ELECT	2.2uF	20%	100V	R803	1-249-414-11	CARBON	560	5%	1/4W
< CONNECTOR >											
* CN801	1-750-532-11	CONNECTOR (B TO B) 6P				R804	1-249-438-11	CARBON	56K	5%	1/4W
* CN802	1-564-510-11	PLUG, CONNECTOR 7P				R805	1-249-438-11	CARBON	56K	5%	1/4W
* CN803	1-564-511-11	PLUG, CONNECTOR 8P				R806	1-249-421-11	CARBON	2.2K	5%	1/4W
* CN804	1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P				R807	1-249-421-11	CARBON	2.2K	5%	1/4W
< DIODE >											
D801	8-719-987-63	DIODE	1N4148M			R808	1-247-717-11	CARBON	2.2K	5%	1/4W
D851	8-719-987-63	DIODE	1N4148M			R809	1-247-717-11	CARBON	1K	5%	1/4W
D901	8-719-987-63	DIODE	1N4148M			R810	1-249-417-11	CARBON	1K	5%	1/4W
D902	8-719-987-63	DIODE	1N4148M			R811	1-249-417-11	CARBON	1K	5%	1/4W
D903	8-719-200-82	DIODE	11ES2			R812	1-249-431-11	CARBON	15K	5%	1/4W
D904	8-719-200-82	DIODE	11ES2			R813	1-249-431-11	CARBON	15K	5%	1/4W
D905	8-719-200-82	DIODE	11ES2			R814	1-249-441-11	CARBON	100K	5%	1/4W
D906	8-719-200-82	DIODE	11ES2			R815	1-249-441-11	CARBON	100K	5%	1/4W
D907	8-719-001-67	DIODE	UZL-12L3			△R816	1-217-151-00	RES, METAL PLATE	0.22		
D908	8-719-933-41	DIODE	HZS6C3L			△R817	1-217-151-00	RES, METAL PLATE	0.22		
D909	8-719-987-63	DIODE	1N4148M			R818	1-247-688-11	CARBON	10	5%	1/4W
D910	8-719-987-63	DIODE	1N4148M			R819	1-247-688-11	CARBON	10	5%	1/4W
D911	8-719-933-33	DIODE	HZS6A1L			R820	1-249-438-11	CARBON	56K	5%	1/4W
< IC >											
IC801	8-749-920-09	IC	STK4152MK2K			R821	1-249-437-11	CARBON	47K	5%	1/4W
IC802	8-759-111-68	IC	uPC1237HA			△R831	1-247-700-11	CARBON	100	5%	1/4W F
IC901	8-759-602-66	IC	M5230L-A			△R832	1-247-700-11	CARBON	100	5%	1/4W F
< TRANSISTOR >											
Q801	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA			R851	1-249-430-11	CARBON	12K	5%	1/4W
Q802	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA			R852	1-249-439-11	CARBON	68K	5%	1/4W
Q850	8-729-900-63	TRANSISTOR	DTA124ES			R853	1-249-433-11	CARBON	22K	5%	1/4W
Q901	8-729-900-80	TRANSISTOR	DTC114ES			R854	1-249-429-11	CARBON	10K	5%	1/4W
Q902	8-729-900-89	TRANSISTOR	DTC144ES			R855	1-249-433-11	CARBON	22K	5%	1/4W
Q903	8-729-209-15	TRANSISTOR	2SD2012			R856	1-249-441-11	CARBON	100K	5%	1/4W
Q904	8-729-141-83	TRANSISTOR	2SA473			R903	1-249-417-11	CARBON	1K	5%	1/4W
Q905	8-729-900-89	TRANSISTOR	DTC144ES			R904	1-249-429-11	CARBON	10K	5%	1/4W
Q906	8-729-900-65	TRANSISTOR	DTA144ES			R905	1-247-903-00	CARBON	1M	5%	1/4W
Q907	8-729-018-60	TRANSISTOR	2SD2012-LC			R906	1-249-409-11	CARBON	220	5%	1/4W
Q908	8-729-018-60	TRANSISTOR	2SD2012-LC			R907	1-249-409-11	CARBON	220	5%	1/4W
						R908	1-249-414-11	CARBON	560	5%	1/4W
						R909	1-249-414-11	CARBON	560	5%	1/4W
						R910	1-249-431-11	CARBON	15K	5%	1/4W
						R911	1-249-431-11	CARBON	15K	5%	1/4W
						R912	1-249-429-11	CARBON	10K	5%	1/4W
						R913	1-249-423-11	CARBON	3.3K	5%	1/4W
						△R914	1-219-193-11	FUSIBLE	220	5%	1/2W F
						R915	1-249-420-11	CARBON	1.8K	5%	1/4W

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

POWER AMP

POWER SUPPLY

SW(A)

SW(B)

Ref. No.	Part No.	Description	Remark
△R916	1-217-642-91	FUSIBLE	6.8 5% 1/4W F

R917	1-249-413-11	CARBON	470 5% 1/4W
R918	1-249-417-11	CARBON	1K 5% 1/4W
R919	1-249-417-11	CARBON	1K 5% 1/4W
R920	1-249-425-11	CARBON	4.7K 5% 1/4W
R921	1-249-417-11	CARBON	1K 5% 1/4W

* 1-646-898-11 POWER SUPPLY BOARD

< CAPACITOR >

C921	1-164-159-11	CERAMIC	0.1uF	50V
C922	1-164-159-11	CERAMIC	0.1uF	50V
C923	1-124-910-11	ELECT	47uF	20% 50V
C924	1-124-910-11	ELECT	47uF	20% 50V

< CONNECTOR >

- * CN911 1-564-321-00 PIN, CONNECTOR 2P
- * CN912 1-750-533-11 CONNECTOR (B TO B) 6P
- * CN913 1-564-705-11 PIN, CONNECTOR (SMALL TYPE) 3P

< DIODE >

D911	8-719-312-09	DIODE	RBA-402
D912	8-719-934-13	DIODE	HZS24-1L

< FUSE >

△F901	1-532-078-00	FUSE (T1A 250V)	(H61/H61M:AEP, UK)
△F901	1-576-107-12	FUSE (3.15A 250V)	(H61M:US, CND)
△F902	1-532-203-00	FUSE (T2A 250V)	(H61:E, EA, MY, SE, JE)

< FUSE HOLDER >

- * FH911 1-533-213-11 HOLDER, FUSE (H61:E, EA, MY, SP, JE)
- * FH911 1-533-293-11 HOLDER, FUSE (H61:AEP, G, IT, EE, AUS/H61M)
- * FH912 1-533-213-31 HOLDER, FUSE (H61:E, EA, MY, SP, JE)
- * FH912 1-533-293-11 HOLDER, FUSE (H61:AEP, G, IT, EE, AUS/H61M)
- * FH913 1-533-213-11 HOLDER, FUSE (H61:E, EA, MY, SP, JE)
- * FH914 1-533-213-31 HOLDER, FUSE (H61:E, EA, MY, SP, JE)

< TRANSISTOR >

Q911	8-729-018-59	TRANSISTOR	2SB1375-LC
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< RESISTOR >

△R921	1-219-134-11	FUSIBLE	0.1 5% 1/4W F
△R922	1-219-134-11	FUSIBLE	0.1 5% 1/4W F
R923	1-249-421-11	CARBON	2.2K 5% 1/4W
△R926	1-212-881-11	FUSIBLE	100 5% 1/4W F

Ref. No.	Part No.	Description	Remark
R9001	1-202-725-00	SOLID	3.3M 10% 1/2W (H61M:US, CND)

R901	1-572-675-11	SWITCH, POWER VOLTAGE CHANGE (VOLTAGE SELECTOR)	(H61:E, EA, MY, SP, JE)
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< TRANSFORMER >

△T901	1-423-447-11	TRANSFORMER, POWER	(H61M:US, CND)
△T901	1-423-448-11	TRANSFORMER, POWER	(H61:AUS/H61M:UK)
△T901	1-423-450-11	TRANSFORMER, POWER	(H61:AEP, G, IT, EE/H61M:AEP)
△T901	1-423-451-11	TRANSFORMER, POWER	(H61:E, EA, MY, SP, JE)

*	1-634-841-14	SW(A) BOARD
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3-343-419-01 HOLDER (S SENSER A)

< CONNECTOR >

*	CNP81	1-568-852-11	SOCKET, CONNECTOR 9P
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< IC >

IC81	8-719-710-03	DI ODE	NJL5165K-B
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< RESISTOR >

R84	1-249-417-11	CARBON	1K 5% 1/4W
R85	1-249-408-11	CARBON	180 5% 1/4W

< SWITCH >

S81	1-571-958-11	SWITCH, PUSH (1 KEY) (SPOP)
S82	1-571-281-21	SWITCH, LEAF (CrO2)
S86	1-571-281-21	SWITCH, LEAF (HALF)

*	1-634-841-14	SW(B) BOARD
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3-343-419-01 HOLDER (S SENSER A)

< CONNECTOR >

*	CNP81	1-568-852-11	SOCKET, CONNECTOR 9P
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< IC >

IC81	8-719-710-03	DI ODE	NJL5165K-B
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< RESISTOR >

R81	1-249-414-11	CARBON	560 5% 1/4W F
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SW(B)**SWITCH**

Ref. No.	Part No.	Description	Remark
R82	1-247-818-11	CARBON	300 5% 1/4W
R83	1-247-834-11	CARBON	1.3K 5% 1/4W
R84	1-249-417-11	CARBON	1K 5% 1/4W F
R85	1-249-408-11	CARBON	180 5% 1/4W F
			< SWITCH >
S81	1-571-958-11	SWITCH, PUSH (1 KEY) (STOP)	
S82	1-571-281-21	SWITCH, LEAF (CrO2)	
S83	1-571-281-21	SWITCH, LEAF (METAL)	
S84	1-571-281-21	SWITCH, LEAF (ERASE PROOF (DECK A))	
S85	1-571-281-21	SWITCH, LEAF (ERASE PROOF (DECK B))	
S86	1-571-281-21	SWITCH, LEAF (HALF)	

*	A-4356-584-A	SWITCH BOARD, COMPLETE	

			< CONNECTOR >
* CN551	1-568-858-11	SOCKET, CONNECTOR 15P	
			< DIODE >
D551	8-719-032-90	LED SEL5420S (< DECK A)	
D552	8-719-032-90	LED SEL5420S (> DECK A)	
D553	8-719-032-82	LED SEL5220S (HIGH SPEED DUBBING)	
D555	8-719-032-82	LED SEL5220S (CD SYNCHRO)	
D556	8-719-033-06	LED SEL5920A (III)	
D557	8-719-032-90	LED SEL5420S (< DECK B)	
D558	8-719-032-90	LED SEL5420S (> DECK B)	
D559	8-719-032-82	LED SEL5220S (● REC)	
			< RESISTOR >
R551	1-249-407-11	CARBON	150 5% 1/4W
R552	1-249-409-11	CARBON	220 5% 1/4W
R553	1-249-411-11	CARBON	330 5% 1/4W
R554	1-249-413-11	CARBON	470 5% 1/4W
R555	1-249-415-11	CARBON	680 5% 1/4W
R556	1-249-417-11	CARBON	1K 5% 1/4W
R557	1-249-420-11	CARBON	1.8K 5% 1/4W
R558	1-249-424-11	CARBON	3.9K 5% 1/4W
R559	1-249-407-11	CARBON	150 5% 1/4W
R560	1-249-409-11	CARBON	220 5% 1/4W
R561	1-249-411-11	CARBON	330 5% 1/4W
R562	1-249-413-11	CARBON	470 5% 1/4W
R563	1-249-415-11	CARBON	680 5% 1/4W
R564	1-249-417-11	CARBON	1K 5% 1/4W
R565	1-249-426-11	CARBON	5.6K 5% 1/4W
R566	1-249-430-11	CARBON	12K 5% 1/4W
R574	1-249-405-11	CARBON	100 5% 1/4W
R575	1-249-406-11	CARBON	120 5% 1/4W

Ref. No.	Part No.	Description	Remark
R576	1-249-406-11	CARBON	120 5% 1/4W
R577	1-249-407-11	CARBON	150 5% 1/4W
R578	1-249-408-11	CARBON	180 5% 1/4W
R579	1-249-409-11	CARBON	220 5% 1/4W
R580	1-249-410-11	CARBON	270 5% 1/4W
R581	1-249-411-11	CARBON	330 5% 1/4W
R582	1-249-413-11	CARBON	470 5% 1/4W
R583	1-249-414-11	CARBON	560 5% 1/4W
R584	1-249-416-11	CARBON	820 5% 1/4W
R585	1-249-418-11	CARBON	1.2K 5% 1/4W
R586	1-249-421-11	CARBON	2.2K 5% 1/4W

			< SWITCH >
S551	1-572-184-11	SWITCH, KEYBOARD (■ DECK A)	
S552	1-572-184-11	SWITCH, KEYBOARD (▷ DECK A)	
S553	1-572-184-11	SWITCH, KEYBOARD (< DECK A)	
S554	1-572-184-11	SWITCH, KEYBOARD (<< DECK B)	
S555	1-572-184-11	SWITCH, KEYBOARD (▷▷ DECK B)	
S556	1-572-184-11	SWITCH, KEYBOARD (● DECK B)	
S557	1-572-184-11	SWITCH, KEYBOARD (HIGH SPEED DUBBING)	
S559	1-572-184-11	SWITCH, KEYBOARD (CD SYNCHRO)	
S560	1-572-184-11	SWITCH, KEYBOARD (■ DECK B)	
S561	1-572-184-11	SWITCH, KEYBOARD (III DECK B)	
S562	1-572-184-11	SWITCH, KEYBOARD (▷ DECK B)	
S563	1-572-184-11	SWITCH, KEYBOARD (< DECK B)	
S564	1-572-184-11	SWITCH, KEYBOARD (<< DECK A)	
S565	1-572-184-11	SWITCH, KEYBOARD (▷▷ DECK A)	
S566	1-572-378-11	SWITCH, SLIDE (DIRECTION)	
S567	1-572-184-11	SWITCH, KEYBOARD (△ OPEN/CLOSE)	
S568	1-572-184-11	SWITCH, KEYBOARD (■ CD)	
S569	1-572-184-11	SWITCH, KEYBOARD (III CD)	
S570	1-572-184-11	SWITCH, KEYBOARD (▷ CD)	
S571	1-572-184-11	SWITCH, KEYBOARD (◀◀ CD)	
S572	1-572-184-11	SWITCH, KEYBOARD (▷▷ CD)	
S573	1-572-184-11	SWITCH, KEYBOARD (TIME)	
S574	1-572-184-11	SWITCH, KEYBOARD (REPEAT)	
S575	1-572-184-11	SWITCH, KEYBOARD (PROGRAM)	
S576	1-572-184-11	SWITCH, KEYBOARD (SHUFFLE)	
S577	1-572-184-11	SWITCH, KEYBOARD (CONTINUE)	
S578	1-572-184-11	SWITCH, KEYBOARD (EDIT)	
S579	1-572-184-11	SWITCH, KEYBOARD (CLEAR)	
S580	1-572-184-11	SWITCH, KEYBOARD (CHECK)	
S587	1-572-935-11	SWITCH, SLIDE (DOLBY NR)	

Ref. No.	Part No.	Description	Remark		Ref. No.	Part No.	Description	Remark					
* A-4356-582-A	TC BOARD, COMPLETE	(H61:G, IT)			< CONNECTOR >								
* A-4356-583-A	TC BOARD, COMPLETE	(H61:E, AUS, EA, MY, SP, JE/H61M:US, CND)			* CN401	1-564-517-11	PLUG, CONNECTOR 2P						
* A-4356-586-A	TC BOARD, COMPLETE	(H61:AEP, EE/H61M:AEP, UK)			CN402	1-580-783-11	CONNECTOR, BOARD TO BOARD	(H61:AEP, G, IT, EE/H61M:AEP, UK)					

< CAPACITOR >													
C121	1-124-443-00	ELECT	100uF	20%	10V	* CN402	1-580-783-21	CONNECTOR, BOARD TO BOARD	(H61:E, AUS, EA, MY, SP, JE/H61M:US, CND)				
C122	1-161-377-00	CERAMIC	0.0047uF	30%	16V	CN403	1-580-783-11	CONNECTOR, BOARD TO BOARD	(H61:AEP, G, IT, EE/H61M:AEP, UK)				
C123	1-124-903-11	ELECT	1uF	20%	50V	* CN403	1-580-783-21	CONNECTOR, BOARD TO BOARD	(H61:E, AUS, EA, MY, SP, JE/H61M:US, CND)				
C125	1-124-907-11	ELECT	10uF	20%	50V	CN404	1-580-783-11	CONNECTOR, BOARD TO BOARD	(H61:AEP, G, IT, EE/H61M:AEP, UK)				
C126	1-136-165-00	FILM	0.1uF	5%	50V	* CN404	1-580-783-21	CONNECTOR, BOARD TO BOARD	(H61:E, AUS, EA, MY, SP, JE/H61M:US, CND)				
C127	1-124-907-11	ELECT	10uF	20%	50V	CN405	1-573-101-11	SOCKET, CONNECTOR 9P					
C128	1-124-903-11	ELECT	1uF	20%	50V	CN406	1-573-101-11	SOCKET, CONNECTOR 9P					
C129	1-124-902-00	ELECT	0.47uF	20%	50V	* CN407	1-565-980-11	HOUSING, CONNECTOR(PC BOARD) 9P					
C130	1-124-907-11	ELECT	10uF	20%	50V	* CN408	1-565-980-11	HOUSING, CONNECTOR(PC BOARD) 9P					
C131	1-164-159-11	CERAMIC	0.1uF		50V	* CN409	1-568-848-11	SOCKET, CONNECTOR 5P					
C132	1-124-907-11	ELECT	10uF	20%	50V	* CN410	1-568-858-11	SOCKET, CONNECTOR 15P					
C134	1-162-294-31	CERAMIC	0.001uF	10%	50V	* CN411	1-564-520-11	PLUG, CONNECTOR 5P					
C221	1-124-443-00	ELECT	100uF	20%	10V	< DIODE >							
C222	1-161-377-00	CERAMIC	0.0047uF	30%	16V	D301	8-719-200-82	DIODE	11ES2				
C223	1-124-903-11	ELECT	1uF	20%	50V	D302	8-719-200-82	DIODE	11ES2				
C225	1-124-907-11	ELECT	10uF	20%	50V	D351	8-719-987-63	DIODE	1N4148M				
C226	1-136-165-00	FILM	0.1uF	5%	50V	D402	8-719-987-63	DIODE	1N4148M				
C227	1-124-907-11	ELECT	10uF	20%	50V	D403	8-719-987-63	DIODE	1N4148M				
C228	1-124-903-11	ELECT	1uF	20%	50V	< IC >							
C229	1-124-902-00	ELECT	0.47uF	20%	50V	IC401	8-759-166-04	IC	M50964-260FPK				
C230	1-124-907-11	ELECT	10uF	20%	50V	IC402	8-759-520-90	IC	PST572E				
C231	1-161-377-00	CERAMIC	0.0047uF	30%	16V	IC403	8-759-098-75	IC	HA12171NT				
C232	1-161-375-00	CERAMIC	0.0022uF	20%	50V	IC404	8-759-207-05	IC	TA7272P				
C233	1-124-902-00	ELECT	0.47uF	20%	50V	< COIL >							
C234	1-162-294-31	CERAMIC	0.001uF	10%	50V	L401	1-410-482-31	INDUCTOR	100uH				
C401	1-124-126-00	ELECT	47uF	20%	10V	L402	1-410-482-31	INDUCTOR	100uH				
C402	1-124-126-00	ELECT	47uF	20%	10V	< TRANSISTOR >							
C403	1-164-159-11	CERAMIC	0.1uF		50V	Q101	8-729-620-05	TRANSISTOR	2SC2603-EF				
C404	1-124-903-11	ELECT	1uF	20%	50V	Q201	8-729-620-05	TRANSISTOR	2SC2603-EF				
C405	1-126-101-11	ELECT	100uF	20%	16V	Q305	8-729-900-80	TRANSISTOR	DTC114ES				
C406	1-126-101-11	ELECT	100uF	20%	16V	Q306	8-729-620-05	TRANSISTOR	2SC2603-EF				
C451	1-126-101-11	ELECT	100uF	20%	16V	Q400	8-729-900-61	TRANSISTOR	DTA114ES				
C452	1-126-101-11	ELECT	100uF	20%	16V	Q401	8-729-900-65	TRANSISTOR	DTA144ES				
C453	1-161-379-00	CERAMIC	0.01uF	20%	25V	Q402	8-729-900-65	TRANSISTOR	DTA144ES				
C454	1-161-379-00	CERAMIC	0.01uF	20%	25V	Q403	8-729-900-65	TRANSISTOR	DTA144ES				
C456	1-162-290-31	CERAMIC	470PF	10%	50V	Q404	8-729-900-65	TRANSISTOR	DTA144ES				
C457	1-162-290-31	CERAMIC	470PF	10%	50V	Q405	8-729-900-65	TRANSISTOR	DTA144ES				
C458	1-164-159-11	CERAMIC	0.1uF		50V								
C459	1-164-159-11	CERAMIC	0.1uF		50V								

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
Q407	8-729-900-89	TRANSISTOR	DTC144ES	R408	1-249-410-11	CARBON	270 5% 1/4W
Q408	8-729-900-65	TRANSISTOR	DTA144ES	R409	1-249-410-11	CARBON	270 5% 1/4W
Q411	8-729-801-84	TRANSISTOR	2SB1013-4	R411	1-249-407-11	CARBON	150 5% 1/4W
Q412	8-729-801-84	TRANSISTOR	2SB1013-4	R412	1-249-411-11	CARBON	330 5% 1/4W
Q413	8-729-900-65	TRANSISTOR	DTA144ES	R413	1-249-421-11	CARBON	2.2K 5% 1/4W
Q414	8-729-900-89	TRANSISTOR	DTC144ES	R414	1-249-421-11	CARBON	2.2K 5% 1/4W
Q415	8-729-620-05	TRANSISTOR	2SC2603-EF	R415	1-249-429-11	CARBON	10K 5% 1/4W
< RESISTOR >				R416	1-249-425-11	CARBON	4.7K 5% 1/4W
R121	1-249-430-11	CARBON	12K 5% 1/4W	R417	1-249-441-11	CARBON	100K 5% 1/4W
R122	1-249-431-11	CARBON	15K 5% 1/4W	R419	1-249-417-11	CARBON	1K 5% 1/4W
R123	1-215-451-00	METAL	18K 1% 1/6W	R420	1-249-429-11	CARBON	10K 5% 1/4W
R124	1-249-429-11	CARBON	10K 5% 1/4W	R421	1-249-425-11	CARBON	4.7K 5% 1/4W
R125	1-249-429-11	CARBON	10K 5% 1/4W	R422	1-249-429-11	CARBON	10K 5% 1/4W
R127	1-249-429-11	CARBON	10K 5% 1/4W	R431	1-249-429-11	CARBON	10K 5% 1/4W
R130	1-249-429-11	CARBON	10K 5% 1/4W	R432	1-249-415-11	CARBON	680 5% 1/4W
R131	1-249-425-11	CARBON	4.7K 5% 1/4W	R433	1-249-429-11	CARBON	10K 5% 1/4W
R132	1-249-429-11	CARBON	10K 5% 1/4W	R434	1-249-415-11	CARBON	680 5% 1/4W
R133	1-249-429-11	CARBON	10K 5% 1/4W	R451	1-249-425-11	CARBON	4.7K 5% 1/4W
R135	1-247-864-11	CARBON	24K 5% 1/4W	R452	1-249-435-11	CARBON	33K 5% 1/4W
R137	1-249-426-11	CARBON	5.6K 5% 1/4W	R453	1-249-437-11	CARBON	47K 5% 1/4W
R141	1-249-421-11	CARBON	2.2K 5% 1/4W	R454	1-247-872-11	CARBON	51K 5% 1/4W
R142	1-247-838-00	CARBON	2K 5% 1/4W	R455	1-247-862-11	CARBON	20K 5% 1/4W
R143	1-247-846-11	CARBON	4.3K 5% 1/4W	R456	1-247-866-11	CARBON	30K 5% 1/4W
R144	1-249-433-11	CARBON	22K 5% 1/4W	R457	1-247-872-11	CARBON	51K 5% 1/4W
R145	1-249-425-11	CARBON	4.7K 5% 1/4W	R458	1-249-405-11	CARBON	100 5% 1/4W
R221	1-249-430-11	CARBON	12K 5% 1/4W	R459	1-249-381-11	CARBON	1 5% 1/4W
R222	1-249-431-11	CARBON	15K 5% 1/4W	R460	1-249-381-11	CARBON	1 5% 1/4W
R223	1-249-426-11	CARBON	5.6K 5% 1/4W	R461	1-249-425-11	CARBON	4.7K 5% 1/4W
R224	1-249-429-11	CARBON	10K 5% 1/4W	R462	1-249-435-11	CARBON	33K 5% 1/4W
R225	1-249-441-11	CARBON	100K 5% 1/4W	R463	1-249-437-11	CARBON	47K 5% 1/4W
R226	1-247-864-11	CARBON	24K 5% 1/4W	R464	1-247-872-11	CARBON	51K 5% 1/4W
R227	1-249-429-11	CARBON	10K 5% 1/4W	R465	1-247-862-11	CARBON	20K 5% 1/4W
R229	1-249-429-11	CARBON	10K 5% 1/4W	R466	1-247-866-11	CARBON	30K 5% 1/4W
R230	1-249-432-11	CARBON	18K 5% 1/4W	R467	1-247-872-11	CARBON	51K 5% 1/4W
R231	1-247-885-00	CARBON	180K 5% 1/4W	R468	1-249-405-11	CARBON	100 5% 1/4W
R241	1-249-421-11	CARBON	2.2K 5% 1/4W	R469	1-249-381-11	CARBON	1 5% 1/4W
R242	1-247-838-00	CARBON	2K 5% 1/4W	R470	1-249-381-11	CARBON	1 5% 1/4W
R243	1-247-846-11	CARBON	4.3K 5% 1/4W	R471	1-249-425-11	CARBON	4.7K 5% 1/4W
R244	1-249-433-11	CARBON	22K 5% 1/4W	R472	1-249-434-11	CARBON	27K 5% 1/4W
R245	1-249-425-11	CARBON	4.7K 5% 1/4W	R473	1-249-425-11	CARBON	4.7K 5% 1/4W
▲R301	1-249-456-11	CARBON	5.6 5% 1/4W F	R474	1-249-429-11	CARBON	10K 5% 1/4W
R351	1-249-429-11	CARBON	10K 5% 1/4W	R475	1-249-434-11	CARBON	27K 5% 1/4W
R401	1-249-429-11	CARBON	10K 5% 1/4W	R476	1-249-429-11	CARBON	10K 5% 1/4W
R402	1-247-903-00	CARBON	1M 5% 1/4W	R477	1-249-410-11	CARBON	270 5% 1/4W
R403	1-247-895-00	CARBON	470K 5% 1/4W	R478	1-249-410-11	CARBON	270 5% 1/4W
R404	1-247-895-00	CARBON	470K 5% 1/4W	< VARIABLE RESISTOR >			
R405	1-249-410-11	CARBON	270 5% 1/4W	RV103	1-241-136-11	RES, ADJ, CARBON	10K
R406	1-249-410-11	CARBON	270 5% 1/4W	RV203	1-241-136-11	RES, ADJ, CARBON	10K

The components identified by mark ▲ or dotted line with mark ▲ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ▲ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.
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Ref. No.	Part No.	Description	Remark		
< VIBRATOR >					
X401	1-577-082-11	VIBRATOR, CERAMIC (4MHz)			
<hr/>					
*	1-646-894-11	VOL BOARD			
<hr/>					
< CAPACITOR >					
C200	1-126-924-11	ELECT	330uF	20%	10V
C201	1-124-907-11	ELECT	10uF	20%	50V
C202	1-124-907-11	ELECT	10uF	20%	50V
<hr/>					
< CONNECTOR >					
* CN201	1-566-972-11	PIN, CONNECTOR (PC BOARD) 7P			
<hr/>					
< IC >					
IC200	8-759-820-62	IC LB1639			
<hr/>					
< RESISTOR >					
R200	1-249-417-11	CARBON	1K	5%	1/4W
R201	1-249-417-11	CARBON	1K	5%	1/4W
R202	1-249-429-11	CARBON	10K	5%	1/4W
<hr/>					
< VARIABLE RESISTOR >					
RV200	1-223-301-11	RES, VAR, CARBON(WITH MOTOR)10K (VOLUME)			
<hr/>					
MISCELLANEOUS					
<hr/>					
9	1-501-594-21	ANTENNA (FM) (G, IT)			
56	1-696-922-11	WIRE (FLAT TYPE) (15 CORE)			
57	1-696-923-11	WIRE (FLAT TYPE) (5 OCRE)			
58	1-696-924-11	WIRE (FLAT TYPE) (5 CORE) (US, CND)			
60	1-696-920-11	WIRE (FLAT TYPE) (11 CORE)			
65	1-690-588-31	WIRE, FLAT TYPE (9 CORE)			
68	1-696-921-11	WIRE (FLAT TYPE) (19 CORE)			
73	1-696-919-11	WIRE (FLAT TYPE) (5 CORE) (E, AUS, EA, MY, SP, JE)			
167	1-638-983-11	PC BOARD, MOTOR FLEXIBLE			
268	1-590-530-11	WIRE, FLAT TYPE			
△304	8-848-144-11	DEVICE, OPTICAL KSS-240A			
305	1-575-001-11	WIRE, FLAT TYPE (12 CORE)			
ANT1	1-501-321-51	ANTENNA, TELESCOPIC (H61)			
△F901	1-532-078-00	FUSE (T1A/250V) (H61/H61M:AEP, UK)			
△F901	1-576-107-11	FUSE (3.15A/250V) (US, CND)			
△F902	1-532-203-00	FUSE (T2A/250V) (E, EA, MY, SP, JE)			
HP101	A-2003-837-F	BASE ASSY, HEAD (DECK A)			
HRP101	A-2003-838-A	DECK ASSY, HEAD (DECK B)			

Ref. No.	Part No.	Description	Remark
IC81A	8-719-710-03	DIODE NJL5165K-B (DECK A)	
IC81B	8-719-710-03	DIODE NJL5165K-B (DECK B)	
M101A	X-3363-501-1	MOTOR ASSY (REEL) (DECK A)	
M101B	X-3363-501-1	MOTOR ASSY (REEL) (DECK B)	
M102A	X-3359-417-1	MOTOR ASSY (CAPSTAN) (DECK A)	

*****	M102B	X-3359-417-1	MOTOR ASSY (CAPSTAN) (DECK B)
*****	M291	A-4608-362-A	MOTOR (L) ASSY (LOADING)
*****	M301	X-4917-523-3	MOTOR ASSY (SPINDLE)
*****	M302	X-4917-504-1	MOTOR ASSY (SLED)
*****	△T901	1-423-447-11	TRANSFORMER, POWER (US, CND)
*****	△T901	1-423-448-11	TRANSFORMER, POWER (AUS, UK)
*****	△T901	1-423-450-11	TRANSFORMER, POWER (AEP, G, IT, EE)
*****	△T901	1-423-451-11	TRANSFORMER, POWER (E, EA, MY, SP, JE)

ACCESSORIES & PACKING MATERIALS

1-466-944-11	REMOTE COMMANDER (RM-S61)
4-941-762-11	COVER (MLY), BATTERY (FOR RM-S61)
*	4-956-936-01
*	4-956-937-01

HARDWARE LIST

#1	7-685-871-01	SCREW +BVTT 3X6 (S)
#2	7-685-650-79	SCREW +BVTP 3X16 TYPE2 IT-3
#3	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S
#4	7-682-548-04	SCREW +BVTT 3X8 (S)
#5	7-621-255-15	SCREW +PTT 2X3 (S)
#6	7-621-770-67	SCREW +PTT 2.6X6 (S)
#7	7-627-556-08	SCREW +P 2.6X2.8
#8	7-621-775-00	SCREW +B 2.6X3
#9	7-685-234-19	SCREW +KTP 2.6X8 TYPE2NON-SLIT
#10	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S
#11	7-624-105-04	STOP RING 2.3, TYPE -E
#12	7-621-775-10	SCREW +B 2.6X4
#13	7-682-550-09	SCREW +B 3X12 (H61)
#14	7-685-649-79	SCREW +BVTP 3X14 TYPE2 N-S (H61)
#15	7-685-647-71	SCREW +BVTP 3X10 TYPE2 IT-3

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

SS-H51

SERVICE MANUAL

AEP Model

SPECIFICATIONS

Speaker system	3-way system
Speaker units	Woofer : 13 cm dia., cone type Tweeter : 5 cm dia., cone type Super tweeter: 2 cm dia., dome type
Enclosure	Bass reflex
Frequency range	65 Hz – 20 kHz
Sensitivity	88 dB/W/m
Rated impedance	6 ohms
Dimensions	Approx. 175 x 285 x 235 mm (7 x 11 ¹ / ₄ x 9 ³ / ₈ inches)
Mass	Approx. 2.9 kg (6 lb 6 oz) net per speaker

Design and specifications subject to change without notice.

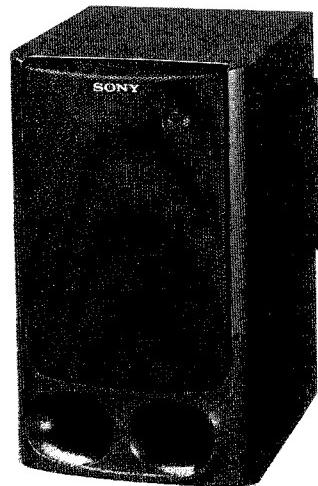
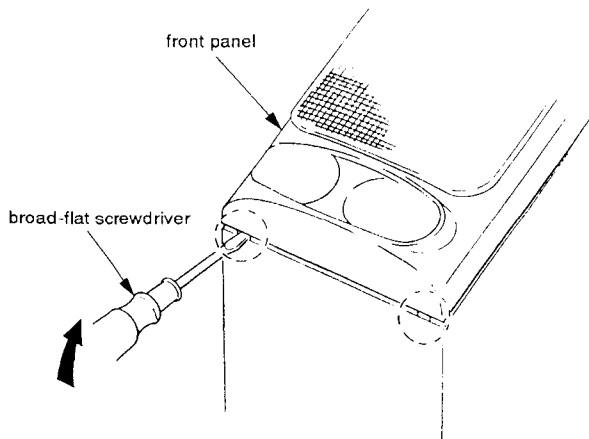


Photo: L-CH

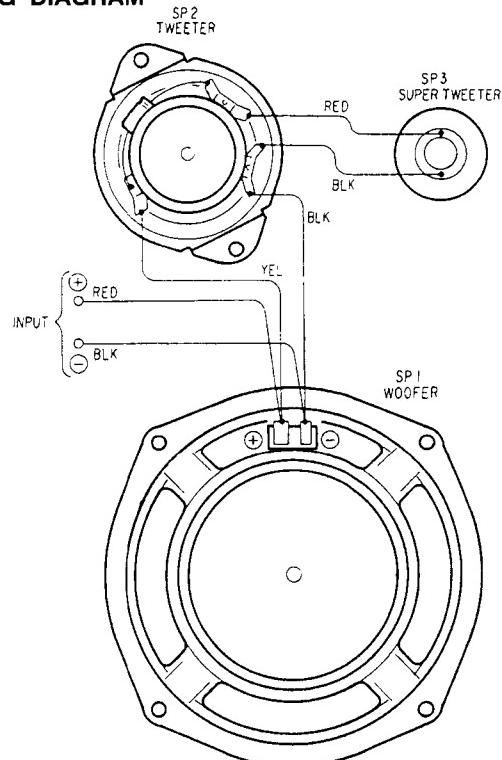
This set is the speaker system in FH-B510, and FH-B610.

1. FRONT PANEL REMOVAL

Note: Be careful not to scratch the cabinet.



2. WIRING DIAGRAM



SPEAKER SYSTEM
SONY®

3. EXPLODED VIEW AND PARTS LIST

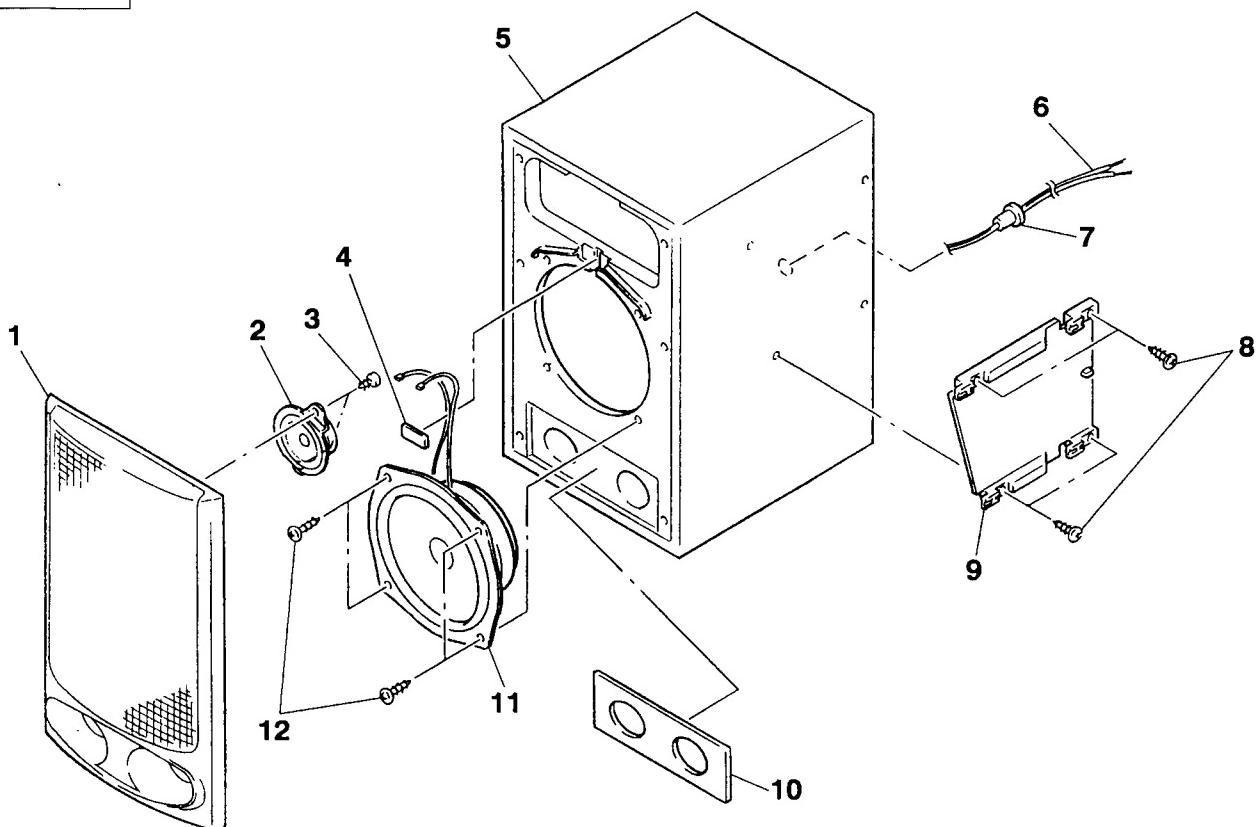
NOTE:

- -XX, -X mean standardized parts, so they may have some difference from the original one.

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- The mechanical parts with no reference number in the exploded views are not supplied.

Illust: L-CH



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	X-4943-045-1	PANEL (L) ASSY, FRONT (Including super tweeter)		9	4-950-752-01	PANEL (L), SIDE	
1	X-4943-046-1	PANEL (R) ASSY, FRONT (Including super tweeter)		9	4-950-753-01	PANEL (R), SIDE	
2	1-504-158-11	SPEAKER (5CM) (Including capacitor)		* 10	4-955-257-01	PACKING	
3	7-685-646-79	SCREW +BVTP 3X8 TYPE2 SLIT		11	1-504-157-11	SPEAKER (12CM)	
4	9-911-844-XX	PACKING		12	4-874-614-11	SCREW +BVTP 3.5X14	
5	X-4943-044-1	CABINET ASSY, SPEAKER					*****
6	1-696-941-11	CORD, SPEAKER					PACKING MATERIAL
7	4-870-003-00	CLIPPER, CORD					*****
8	4-874-614-61	SCREW +BVTP 3.5X16		*	4-956-539-01	CUSHION	

9-957-545-11

Sony Corporation
Audio Group

English

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